

SEQUENCE LISTING

<110> Choi

<120> Staphylococcus aureus Polynucleotides and Polypeptides

<130> PB560

<150> PCT/US00/23773

<151> 2000-08-31

<150> US 60/151,933

<151> 1999-09-01

<150> US 08/781,986

<151> 1997-01-03

<150> US 08/956,171

<151> 1997-10-20

<150> US 60/009,861

<151> 1996-01-06

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<170> PatentIn Ver. 2.0

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35 40 45

Lys Ile Leu Pro Phe Asp Ala Asn Asn Ile Lys Glu Asp Met Val Val
50 55 60

Ile Gln Gly Asn Ala Phe Ala Ser Ser His Glu Glu Ile Val Arg Ala
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His Gln Leu Lys Leu Asp Val Val Ser Tyr Asn Asp Phe Leu Gly Gln
85 90 95

Ile Ile Asp Gln Tyr Thr Ser Val Ala Val Thr Gly Ala His Gly Lys
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Thr Ser Thr Thr Gly Leu Leu Ser His Val Met Asn Gly Asp Lys Lys
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Asp Tyr Phe Ala Phe Glu Ala Cys Glu Tyr Arg Arg His Phe Leu Ser
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Tyr Lys Pro Asp Tyr Ala Ile Met Thr Asn Ile Asp Phe Asp His Pro
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Asp Tyr Phe Lys Asp Ile Asn Asp Val Phe Asp Ala Phe Gln Glu Met
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Ala His Asn Val Lys Lys Gly Ile Ile Ala Trp Gly Asp Asp Glu His
195 200 205

Leu Arg Lys Ile Glu Ala Asp Val Pro Ile Tyr Tyr Tyr Gly Phe Lys
210 215 220

Asp Ser Asp Asp Ile Tyr Ala Gln Asn Ile Gln Ile Thr Asp Lys Gly
225 230 235 240

Thr Ala Phe Asp Val Tyr Val Asp Gly Glu Phe Tyr Asp His Phe Leu
245 250 255

Ser Pro Gln Tyr Gly Asp His Thr Val Leu Asn Ala Leu Ala Val Ile
260 265 270

Ala Ile Ser Tyr Leu Glu Lys Leu Asp Val Thr Asn Ile Lys Glu Ala
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Leu Glu Thr Phe Gly Gly Val Lys Arg Arg Phe Asn Glu Thr Thr Ile
290 295 300

Ala Asn Gln Val Ile Val Asp Asp Tyr Ala His His Pro Arg Glu Ile

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 Val Ala Val Phe Gln Pro His Thr Phe Ser Arg Thr Gln Ala Phe Leu
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 Asn Glu Phe Ala Glu Ser Leu Ser Lys Ala Asp Arg Val Phe Leu Cys
 355 360 365
 Glu Ile Phe Gly Ser Ile Arg Glu Asn Thr Gly Ala Leu Thr Ile Gln
 370 375 380
 Asp Leu Ile Asp Lys Ile Glu Gly Ala Ser Leu Ile Asn Glu Asp Ser
 385 390 395 400
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Glu Leu Asn Asn Gly Glu
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 35 40 45
 Thr Pro Val Gln Gln Leu Ala Ser Ile Asn Val Pro Glu Ala Arg Leu
 50 55 60
 Leu Val Ile Ser Pro Tyr Asp Lys Thr Ser Val Ala Asp Ile Glu Lys
 65 70 75 80
 Ala Ile Ile Ala Ala Asn Leu Gly Val Asn Pro Thr Ser Asp Gly Glu
 85 90 95
 Val Ile Arg Ile Ala Val Pro Ala Leu Thr Glu Glu Arg Arg Lys Glu
 100 105 110
 Arg Val Lys Asp Val Lys Lys Ile Gly Glu Glu Ala Lys Val Ser Val
 115 120 125
 Arg Asn Ile Arg Arg Asp Met Asn Asp Gln Leu Lys Lys Asp Glu Lys
 130 135 140
 Asn Gly Asp Ile Thr Glu Asp Glu Leu Arg Ser Gly Thr Glu Asp Val
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Gln Lys Ala Thr Asp Asn Ser Ile Lys Glu Ile Asp Gln Met Ile Ala
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 35 40 45
 Val Glu Leu Asn Met Asp Gln Gly Thr Phe Lys Val Ile Ala Arg Lys
 50 55 60
 Asp Val Val Glu Glu Val Phe Asp Asp Arg Asp Glu Val Asp Leu Ser
 65 70 75 80
 Thr Ala Leu Val Lys Asn Pro Ala Tyr Glu Ile Gly Asp Ile Tyr Glu
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 Glu Asp Val Thr Pro Lys Asp Phe Gly Arg Val Gly Ala Gln Ala Ala

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<212> PRT

<213> Homo sapiens

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Glu Ser Met Asn Met Thr Glu Gln Ile Phe Arg Val Val Ile Pro Glu
                35                      40                      45

Glu Glu Glu Thr Gln Val Lys Asp Gly Lys Ala Lys Thr Thr Val Lys
                50                      55                      60

Lys Thr Phe Pro Gly Tyr Val Leu Val Glu Leu Ile Met Thr Asp Glu
                65                      70                      75                      80

Ser Trp Tyr Val Val Arg Asn Thr Pro Gly Val Thr Gly Phe Val Gly
                85                      90                      95

Ser Ala Gly Ala Gly Ser Lys Pro Asn Pro Leu Leu Pro Glu Glu Val
                100                      105                      110

Arg Phe Ile Leu Lys Gln Met Gly Leu Lys Glu Lys Thr Ile Asp Val
                115                      120                      125

Glu Leu Glu Val Gly Glu Gln Val Arg Ile Lys Ser Gly Pro Phe Ala
                130                      135                      140

Asn Gln Val Gly Glu Val Gln Glu Ile Glu Thr Asp Lys Phe Lys Leu
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Phe Asp Gln Ile Glu Lys Leu
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<213> Homo sapiens

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Lys Arg Ile Asp Ser Ala Glu Glu Ile Met Glu Leu Lys Gln Phe Ile
              20              25              30

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Lys Asn Tyr Val Gln Ser His Ser Phe Ile Lys Ser Leu Val Leu Gly
              35              40              45

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Ile Ser Gly Gly Gln Asp Ser Thr Leu Val Gly Lys Leu Val Gln Met
              50              55              60

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Ser Val Asn Glu Leu Arg Glu Glu Gly Ile Asp Cys Thr Phe Ile Ala
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Val Lys Leu Pro Tyr Gly Val Gln Lys Asp Ala Asp Glu Val Glu Gln
              85              90              95

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Ala Leu Arg Phe Ile Glu Pro Asp Glu Ile Val Thr Val Asn Ile Lys
              100              105              110

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Pro Ala Val Asp Gln Ser Val Gln Ser Leu Lys Glu Ala Gly Ile Val
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Leu Thr Asp Phe Gln Lys Gly Asn Glu Lys Ala Arg Glu Arg Met Lys
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Val Gln Phe Ser Ile Ala Ser Asn Arg Gln Gly Ile Val Val Gly Thr
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Asp His Ser Ala Glu Asn Ile Thr Gly Phe Tyr Thr Lys Tyr Gly Asp
              165              170              175

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Gly Ala Ala Asp Ile Ala Pro Ile Phe Gly Leu Asn Lys Arg Gln Gly
              180              185              190

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Arg Gln Leu Leu Ala Tyr Leu Gly Ala Pro Lys Glu Leu Tyr Glu Lys
195 200 205

Thr Pro Thr Ala Asp Leu Glu Asp Asp Lys Pro Gln Leu Pro Asp Glu
210 215 220

Asp Ala Leu Gly Val Thr Tyr Glu Ala Ile Asp Asn Tyr Leu Glu Gly
225 230 235 240

Lys Pro Val Thr Pro Glu Glu Gln Lys Val Ile Glu Asn His Tyr Ile
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Arg Asn Ala His Lys Arg Glu Leu Ala Tyr Thr Arg Tyr Thr Trp Pro
260 265 270

Lys Ser

<210> 13
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<212> DNA
<213> Homo sapiens

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35 40 45

Glu Val Glu Asn Phe Pro Gly Phe Glu Met Ile Thr Gly Pro Asp Leu
50 55 60

Ser Thr Lys Met Phe Glu His Ala Lys Lys Phe Gly Ala Val Tyr Gln
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 Tyr Gly Asp Ile Lys Ser Val Glu Asp Lys Gly Glu Tyr Lys Val Ile
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 Asn Phe Gly Asn Lys Glu Leu Thr Ala Lys Ala Val Ile Ile Ala Thr
 100 105 110
 Gly Ala Glu Tyr Lys Lys Ile Gly Val Pro Gly Glu Gln Glu Leu Gly
 115 120 125
 Gly Arg Gly Val Ser Tyr Cys Ala Val Cys Asp Gly Ala Phe Phe Lys
 130 135 140
 Asn Lys Arg Leu Phe Val Ile Gly Gly Gly Asp Ser Ala Val Glu Glu
 145 150 155 160
 Gly Thr Phe Leu Thr Lys Phe Ala Asp Lys Val Thr Ile Val His Arg
 165 170 175
 Arg Asp Glu Leu Arg Ala Gln Arg Ile Leu Gln Asp Arg Ala Phe Lys
 180 185 190
 Asn Asp Lys Ile Asp Phe Ile Trp Ser His Thr Leu Lys Ser Ile Asn
 195 200 205
 Glu Lys Asp Gly Lys Val Gly Ser Val Thr Leu Thr Ser Thr Lys Asp
 210 215 220
 Gly Ser Glu Glu Thr His Glu Ala Asp Gly Val Phe Ile Tyr Ile Gly
 225 230 235 240
 Met Lys Pro Leu Thr Ala Pro Phe Lys Asp Leu Gly Ile Thr Asn Asp
 245 250 255
 Val Gly Tyr Ile Val Thr Lys Asp Asp Met Thr Thr Ser Val Pro Gly
 260 265 270
 Ile Phe Ala Ala Gly Asp Val Arg Asp Lys Gly Leu Arg Gln Ile Val
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<210> 15
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 <212> DNA
 <213> Homo sapiens

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 gaaaaaacacc cacgtgtact tgtaggtcgc gatactagag tttcaggtga aatgttagaa 180
 tcagcattaa tagctggttt gatttcaatt ggtgcagaag tgatgcgatt aggtattatt 240
 tcaacaccag gtgttcata tttaacacgc gatatgggtg cagagttagg tgtaatgatt 300

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Pro Phe Leu Phe Gly Asp Leu Glu Ala Asp Thr Glu Thr Ile Gly Cys
195 200 205

Ser Pro Asp Gly Tyr Asn Ile Asn Glu Lys Cys Gly Ser Thr His Pro
210 215 220

Glu Lys Leu Ala Glu Lys Val Val Glu Thr Glu Ser Asp Phe Gly Leu
225 230 235 240

Ala Phe Asp Gly Asp Gly Asp Arg Ile Ile Ala Val Asp Glu Asn Gly
245 250 255

Gln Ile Val Asp Gly Asp Gln Ile Met Phe Ile Ile Gly Gln Glu Met
260 265 270

His Lys Asn Gln Glu Leu Asn Asn Asp Met Ile Val Ser Thr Val Met
275 280 285

Ser Asn Leu Gly Phe Tyr Lys Ala Leu Glu Gln Glu Gly Ile Lys Ser
290 295 300

Asn Lys Thr Lys Val Gly Asp Arg Tyr Val Val Glu Glu Met Arg Arg
305 310 315 320

Gly Asn Tyr Asn Leu Gly Gly Glu Gln Ser Gly His Ile Val Met Met
325 330 335

Asp Tyr Asn Thr Thr Gly Asp Gly Leu Leu Thr Gly Ile Gln Leu Ala
340 345 350

Ser Val Ile Lys Met Thr Gly Lys Ser Leu Ser Glu Leu Ala Gly Gln
355 360 365

Met Lys Lys Tyr Pro Gln Ser Leu Ile Asn Val Arg Val Thr Asp Lys
370 375 380

Tyr Arg Val Glu Glu Asn Val Asp Val Lys Glu Val Met Thr Lys Val
385 390 395 400

Glu Val Glu Met Asn Gly Glu Gly Arg Ile Leu Val Arg Pro Ser Gly
405 410 415

Thr Glu Pro Leu Val Arg Val Met Val Glu Ala Ala Thr Asp Glu Asp
420 425 430

Ala Glu Arg Phe Ala Gln Gln Ile Ala Asp Val Val Gln Asp Lys Met
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Gly Leu Asp Lys
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<210> 17

<211> 1359

<212> DNA

<213> Homo sapiens

<400> 17

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Leu	Asn	Asp	Gly	Gly	Ile	Val	Glu	Val	Tyr	Arg	Thr	Asn	Asp	Val	Glu				
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Glu	Ile	Met	Gly	Val	Asn	Asp	Arg	Val	Met	Leu	Ser	Gln	Ala	Glu	Lys				
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Ala	Met	Gln	Arg	Arg	Thr	Asn	His	Tyr	His	Met	Leu	Asn	Gly	Val	Thr				
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Ile	Ile	Asp	Pro	Asp	Ser	Thr	Tyr	Ile	Gly	Pro	Asp	Val	Thr	Ile	Gly				
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Ser	Asp	Thr	Val	Ile	Glu	Pro	Gly	Val	Arg	Ile	Asn	Gly	Arg	Thr	Glu				
		275					280					285							
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Thr	Ile	Glu	Asn	Gly	Ala	Cys	Ile	Gln	Gln	Ser	Val	Val	Asn	Asp	Ala				
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				325					330					335					
Gly	Ala	Gln	Leu	Gly	Ala	Asp	Val	Lys	Val	Gly	Asn	Phe	Val	Glu	Ile				
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Lys	Lys	Ala	Asp	Leu	Lys	Asp	Gly	Ala	Lys	Val	Ser	His	Leu	Ser	Tyr				
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Ile	Gly	Asp	Ala	Val	Ile	Gly	Glu	Arg	Thr	Asn	Ile	Gly	Cys	Gly	Thr				
Ile	Thr	Val	Asn	Tyr	Asp	Gly	Glu	Asn	Lys	Phe	Lys	Thr	Ile	Val	Gly				
385					390						395				400				
Lys	Asp	Ser	Phe	Val	Gly	Cys	Asn	Val	Asn	Leu	Val	Ala	Pro	Val	Thr				
				405					410					415					
Ile	Gly	Asp	Asp	Val	Leu	Val	Ala	Ala	Gly	Ser	Thr	Ile	Thr	Asp	Asp				
			420					425					430						
Val	Pro	Asn	Asp	Ser	Leu	Ala	Val	Ala	Arg	Ala	Arg	Gln	Thr	Thr	Lys				
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<210> 19
 <211> 1317
 <212> DNA

<213> Homo sapiens

<400> 19

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ttagcgtata cacctgaaaa atTTTatgat agaaagcaaa ttacagtaaa aacttatcat 240
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cttggctttg aaagtgatat tacattttaca cttagaaatt tagaagacac tgatgctatc 420
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gataagcggg agattccata ccgTTTaaat gaggaaatta atgctatcaa tggaaatgaa 660
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caccCCAatt caaaatttat cgaaagTTca aatatcaaac ttgatcgaag aggtttcata 780
ccggtaaacg ataaatttga aacaaatggt ccaaacattt atgcaatagg cgatattgca 840
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tcgatggcaa tgatgaacca gctaactgta gatgagTTaa ctgagTTtga agtggcttat 1260
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<210> 20

<211> 439

<212> PRT

<213> Homo sapiens

<400> 20

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Phe Glu Lys Asp Arg Asp Met Ser Phe Ala Asn Cys Ala Leu Pro Tyr
      35                      40                      45

Val Ile Gly Glu Val Val Glu Asp Arg Arg Tyr Ala Leu Ala Tyr Thr
      50                      55                      60

Pro Glu Lys Phe Tyr Asp Arg Lys Gln Ile Thr Val Lys Thr Tyr His
      65                      70                      75                      80

Glu Val Ile Ala Ile Asn Asp Glu Arg Gln Thr Val Ser Val Leu Asn
      85                      90                      95

Arg Lys Thr Asn Glu Gln Phe Glu Glu Ser Tyr Asp Lys Leu Ile Leu
      100                      105                      110

Ser Pro Gly Ala Ser Ala Asn Ser Leu Gly Phe Glu Ser Asp Ile Thr
      115                      120                      125

Phe Thr Leu Arg Asn Leu Glu Asp Thr Asp Ala Ile Asp Gln Phe Ile
      130                      135                      140

Lys Ala Asn Gln Val Asp Lys Val Leu Val Val Gly Ala Gly Tyr Val
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145		150		155		160
Ser Leu Glu Val	Leu Glu Asn Leu Tyr	Glu Arg Gly Leu His	Pro Thr			
	165	170	175			
Leu Ile His Arg	Ser Asp Lys Ile Asn Lys	Leu Met Asp	Ala Asp Met			
	180	185	190			
Asn Gln Pro Ile	Leu Asp Glu Leu Asp Lys Arg	Glu Ile Pro Tyr Arg				
	195	200	205			
Leu Asn Glu Glu Ile	Asn Ala Ile Asn Gly Asn Glu Ile Thr Phe Lys					
	210	215	220			
Ser Gly Lys Val Glu His Tyr Asp Met Ile Ile Glu Gly Val Gly Thr						
225	230	235	240			
His Pro Asn Ser Lys Phe Ile Glu Ser Ser Asn Ile Lys Leu Asp Arg						
	245	250	255			
Lys Gly Phe Ile Pro Val Asn Asp Lys Phe Glu Thr Asn Val Pro Asn						
	260	265	270			
Ile Tyr Ala Ile Gly Asp Ile Ala Thr Ser His Tyr Arg His Val Asp						
	275	280	285			
Leu Pro Ala Ser Val Pro Leu Ala Trp Gly Ala His Arg Ala Ala Ser						
	290	295	300			
Ile Val Ala Glu Gln Ile Ala Gly Asn Asp Thr Ile Glu Phe Lys Gly						
305	310	315	320			
Phe Leu Gly Asn Asn Ile Val Lys Phe Phe Asp Tyr Thr Phe Ala Ser						
	325	330	335			
Val Gly Val Lys Pro Asn Glu Leu Lys Gln Phe Asp Tyr Lys Met Val						
	340	345	350			
Glu Val Thr Gln Gly Ala His Ala Asn Tyr Tyr Pro Gly Asn Ser Pro						
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Leu His Leu Arg Val Tyr Tyr Asp Thr Ser Asn Arg Gln Ile Leu Arg						
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Ala Ala Ala Val Gly Lys Glu Gly Ala Asp Lys Arg Ile Asp Val Leu						
385	390	395	400			
Ser Met Ala Met Met Asn Gln Leu Thr Val Asp Glu Leu Thr Glu Phe						
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 <212> DNA

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<213> Homo sapiens

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<210> 22

<211> 451

<212> PRT

<213> Homo sapiens

<400> 22

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Val Ile Tyr Gly Ile Leu Asn Ile Tyr Phe Ile Gly Phe Leu Glu Asp
      35                40                45

Ser His Met Ile Ser Ala Ile Ser Leu Thr Leu Pro Val Phe Ala Ile
      50                55                60

Leu Met Gly Leu Gly Asn Leu Phe Gly Val Gly Ala Gly Thr Tyr Ile
      65                70                75                80

Ser Arg Leu Leu Gly Ala Lys Asp Tyr Ser Lys Ser Lys Phe Val Ser
      85                90                95

Ser Phe Ser Ile Tyr Gly Gly Ile Ala Leu Gly Leu Ile Val Ile Leu
      100                105                110

Val Thr Leu Pro Phe Ser Asp Gln Ile Ala Ala Ile Leu Gly Ala Arg
      115                120                125

Gly Glu Thr Leu Ala Leu Thr Ser Asn Tyr Leu Lys Val Met Phe Leu
      130                135                140
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Ser	Ala	Pro	Phe	Val	Ile	Leu	Phe	Phe	Ile	Leu	Glu	Gln	Phe	Ala	Arg	145	150	155	160
Ala	Ile	Gly	Ala	Pro	Met	Val	Ser	Met	Ile	Gly	Met	Leu	Ala	Ser	Val	165	170	175	
Gly	Leu	Asn	Ile	Ile	Leu	Asp	Pro	Ile	Leu	Ile	Phe	Gly	Phe	Asp	Leu	180	185	190	
Asn	Val	Val	Gly	Ala	Ala	Leu	Gly	Thr	Ala	Ile	Ser	Asn	Val	Ala	Ala	195	200	205	
Ala	Leu	Phe	Phe	Ile	Ile	Tyr	Phe	Met	Lys	Asn	Ser	Asp	Val	Val	Ser	210	215	220	
Val	Asn	Ile	Lys	Leu	Ala	Lys	Pro	Asn	Lys	Glu	Met	Leu	Ser	Glu	Ile	225	230	235	240
Phe	Lys	Ile	Gly	Ile	Pro	Ala	Phe	Leu	Met	Ser	Ile	Leu	Met	Gly	Phe	245	250	255	
Thr	Gly	Leu	Val	Leu	Asn	Leu	Phe	Leu	Ala	His	Tyr	Gly	Asn	Phe	Ala	260	265	270	
Ile	Ala	Ser	Tyr	Gly	Ile	Ser	Phe	Arg	Leu	Val	Gln	Phe	Pro	Glu	Leu	275	280	285	
Ile	Ile	Met	Gly	Leu	Cys	Glu	Gly	Val	Val	Pro	Leu	Ile	Ala	Tyr	Asn	290	295	300	
Phe	Met	Ala	Asn	Lys	Gly	Arg	Met	Lys	Asp	Val	Ile	Lys	Ala	Val	Ile	305	310	315	320
Met	Ser	Ile	Gly	Val	Ile	Phe	Val	Val	Cys	Met	Ser	Ala	Val	Phe	Thr	325	330	335	
Ile	Gly	His	His	Met	Val	Gly	Leu	Phe	Thr	Thr	Asp	Gln	Ala	Ile	Val	340	345	350	
Glu	Met	Ala	Thr	Phe	Ile	Leu	Lys	Val	Thr	Met	Ala	Ser	Leu	Leu	Leu	355	360	365	
Asn	Gly	Ile	Gly	Phe	Leu	Phe	Thr	Gly	Met	Leu	Gln	Ala	Thr	Gly	Gln	370	375	380	
Gly	Arg	Gly	Ala	Thr	Ile	Met	Ala	Ile	Leu	Gln	Gly	Ala	Ile	Ile	Ile	385	390	395	400
Pro	Val	Leu	Phe	Ile	Met	Asn	Ala	Leu	Phe	Gly	Leu	Thr	Gly	Val	Ile	405	410	415	
Trp	Ser	Leu	Leu	Ile	Ala	Glu	Ser	Leu	Cys	Ala	Leu	Ala	Ala	Met	Leu	420	425	430	
Ile	Val	Tyr	Leu	Leu	Arg	Asp	Arg	Leu	Thr	Val	Asp	Thr	Ser	Glu	Leu	435	440	445	
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 <211> 1479
 <212> DNA
 <213> Homo sapiens

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<210> 24
 <211> 493
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Ser His Lys Phe Cys Gln Asn Val Ala Asp Gln Gly Cys Lys Leu Val
 50 55 60
 Val Val Asn Lys Glu Gln Ser Leu Pro Ala Asn Val Thr Gln Val Val
 65 70 75 80
 Val Pro Asp Thr Leu Arg Val Ala Ser Ile Leu Ala His Thr Leu Tyr
 85 90 95
 Asp Tyr Pro Ser His Gln Leu Val Thr Phe Gly Val Thr Gly Thr Asn
 100 105 110

Gly	Lys	Thr	Ser	Ile	Ala	Thr	Met	Ile	His	Leu	Ile	Gln	Arg	Lys	Leu	115	120	125
Gln	Lys	Asn	Ser	Ala	Tyr	Leu	Gly	Thr	Asn	Gly	Phe	Gln	Ile	Asn	Glu	130	135	140
Thr	Lys	Thr	Lys	Gly	Ala	Asn	Thr	Thr	Pro	Glu	Thr	Val	Ser	Leu	Thr	145	150	155
Lys	Lys	Ile	Lys	Glu	Ala	Val	Asp	Ala	Gly	Ala	Glu	Ser	Met	Thr	Leu	165	170	175
Glu	Val	Ser	Ser	His	Gly	Leu	Val	Leu	Gly	Arg	Leu	Arg	Gly	Val	Glu	180	185	190
Phe	Asp	Val	Ala	Ile	Phe	Ser	Asn	Leu	Thr	Gln	Asp	His	Leu	Asp	Phe	195	200	205
His	Gly	Thr	Met	Glu	Ala	Tyr	Gly	His	Ala	Lys	Ser	Leu	Leu	Phe	Ser	210	215	220
Gln	Leu	Gly	Glu	Asp	Leu	Ser	Lys	Glu	Lys	Tyr	Val	Val	Leu	Asn	Asn	225	230	235
Asp	Asp	Ser	Phe	Ser	Glu	Tyr	Leu	Arg	Thr	Val	Thr	Pro	Tyr	Glu	Val	245	250	255
Phe	Ser	Tyr	Gly	Ile	Asp	Glu	Glu	Ala	Gln	Phe	Met	Ala	Lys	Asn	Ile	260	265	270
Gln	Glu	Ser	Leu	Gln	Gly	Val	Ser	Phe	Asp	Phe	Val	Thr	Pro	Phe	Gly	275	280	285
Thr	Tyr	Pro	Val	Lys	Ser	Pro	Tyr	Val	Gly	Lys	Phe	Asn	Ile	Ser	Asn	290	295	300
Ile	Met	Ala	Ala	Met	Ile	Ala	Val	Trp	Ser	Lys	Gly	Thr	Ser	Leu	Glu	305	310	315
Thr	Ile	Ile	Lys	Ala	Val	Glu	Asn	Leu	Glu	Pro	Val	Glu	Gly	Arg	Leu	325	330	335
Glu	Val	Leu	Asp	Pro	Ser	Leu	Pro	Ile	Asp	Leu	Ile	Ile	Asp	Tyr	Ala	340	345	350
His	Thr	Ala	Asp	Gly	Met	Asn	Lys	Leu	Ile	Asp	Ala	Val	Gln	Pro	Phe	355	360	365
Val	Lys	Gln	Lys	Leu	Ile	Phe	Leu	Val	Gly	Met	Ala	Gly	Glu	Arg	Asp	370	375	380
Leu	Thr	Lys	Thr	Pro	Glu	Met	Gly	Arg	Val	Ala	Cys	Arg	Ala	Asp	Tyr	385	390	395
Val	Ile	Phe	Thr	Pro	Asp	Asn	Pro	Ala	Asn	Asp	Asp	Pro	Lys	Met	Leu	405	410	415
Thr	Ala	Glu	Leu	Ala	Lys	Gly	Ala	Thr	His	Gln	Asn	Tyr	Ile	Glu	Phe	420	425	430

Asp Asp Arg Ala Glu Gly Ile Lys His Ala Ile Asp Ile Ala Glu Pro
435 440 445

Gly Asp Thr Val Val Leu Ala Ser Lys Gly Arg Glu Pro Tyr Gln Ile
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Met Pro Gly His Ile Lys Val Pro His Arg Asp Asp Leu Ile Gly Leu
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Glu Ala Ala Tyr Lys Lys Phe Gly Gly Gly Pro Val Asp
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<210> 25

<211> 1356

<212> DNA

<213> Homo sapiens

<400> 25

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gatactacag gtatttcatt tacgattaat aataaagaac attacgatct gccaatatta 840
ggaaagcata atatgaaaaa tgcgacgatt gccattgcgg ttggtcatga attaggtttg 900
acataataca caatctatca aaatttaaaa aatgtcagct taactggtat gcgtatggaa 960
caacatacat tagaaaatga tattactgtg ataaatgatg cctataatgc aagtcctaca 1020
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ggagatgttt tagaattagg tgaaaatagc aaagaaatgc atatcggtgt aggtaattat 1140
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gattcggggc agcaacatgt cgaaaaagca caacacttca attctaaaga cgatatgata 1260
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<210> 26

<211> 452

<212> PRT

<213> Homo sapiens

<400> 26

Met Ile Asn Val Thr Leu Lys Gln Ile Gln Ser Trp Ile Pro Cys Glu
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Ile Glu Asp Gln Phe Leu Asn Gln Glu Ile Asn Gly Val Thr Ile Asp
20 25 30

Ser Arg Ala Ile Ser Lys Asn Met Leu Phe Ile Pro Phe Lys Gly Glu
35 40 45

Asn Val Asp Gly His Arg Phe Val Ser Lys Ala Leu Gln Asp Gly Ala
50 55 60

Gly	Ala	Ala	Phe	Tyr	Gln	Arg	Gly	Thr	Pro	Ile	Asp	Glu	Asn	Val	Ser	
65					70					75					80	
Gly	Pro	Ile	Ile	Trp	Val	Glu	Asp	Thr	Leu	Thr	Ala	Leu	Gln	Gln	Leu	
				85					90					95		
Ala	Gln	Ala	Tyr	Leu	Arg	His	Val	Asn	Pro	Lys	Val	Ile	Ala	Val	Thr	
			100					105					110			
Gly	Ser	Asn	Gly	Lys	Thr	Thr	Thr	Lys	Asp	Met	Ile	Glu	Ser	Val	Leu	
		115					120					125				
His	Thr	Glu	Phe	Lys	Val	Lys	Lys	Thr	Gln	Gly	Asn	Tyr	Asn	Asn	Glu	
	130					135					140					
Ile	Gly	Leu	Pro	Leu	Thr	Ile	Leu	Glu	Leu	Asp	Asn	Asp	Thr	Glu	Ile	
145					150					155					160	
Ser	Ile	Leu	Glu	Met	Gly	Met	Ser	Gly	Phe	His	Glu	Ile	Glu	Phe	Leu	
				165					170					175		
Ser	Asn	Leu	Ala	Gln	Pro	Asp	Ile	Ala	Val	Ile	Thr	Asn	Ile	Gly	Glu	
			180					185					190			
Ser	His	Met	Gln	Asp	Leu	Gly	Ser	Arg	Glu	Gly	Ile	Ala	Lys	Ala	Lys	
		195					200					205				
Ser	Glu	Ile	Thr	Ile	Gly	Leu	Lys	Asp	Asn	Gly	Thr	Phe	Ile	Tyr	Asp	
	210					215					220					
Gly	Asp	Glu	Pro	Leu	Leu	Lys	Pro	His	Val	Lys	Glu	Val	Glu	Asn	Ala	
225					230					235					240	
Lys	Cys	Ile	Ser	Ile	Gly	Val	Ala	Thr	Asp	Asn	Ala	Leu	Val	Cys	Ser	
				245					250					255		
Val	Asp	Asp	Arg	Asp	Thr	Thr	Gly	Ile	Ser	Phe	Thr	Ile	Asn	Asn	Lys	
			260				265						270			
Glu	His	Tyr	Asp	Leu	Pro	Ile	Leu	Gly	Lys	His	Asn	Met	Lys	Asn	Ala	
		275					280					285				
Thr	Ile	Ala	Ile	Ala	Val	Gly	His	Glu	Leu	Gly	Leu	Thr	Tyr	Asn	Thr	
	290					295					300					
Ile	Tyr	Gln	Asn	Leu	Lys	Asn	Val	Ser	Leu	Thr	Gly	Met	Arg	Met	Glu	
305				310						315					320	
Gln	His	Thr	Leu	Glu	Asn	Asp	Ile	Thr	Val	Ile	Asn	Asp	Ala	Tyr	Asn	
			325						330					335		
Ala	Ser	Pro	Thr	Ser	Met	Arg	Ala	Ala	Ile	Asp	Thr	Leu	Ser	Thr	Leu	
			340					345					350			
Thr	Gly	Arg	Arg	Ile	Leu	Ile	Leu	Gly	Asp	Val	Leu	Glu	Leu	Gly	Glu	
		355					360					365				
Asn	Ser	Lys	Glu	Met	His	Ile	Gly	Val	Gly	Asn	Tyr	Leu	Glu	Glu	Lys	
	370					375					380					

His Ile Asp Val Leu Tyr Thr Phe Gly Asn Glu Ala Lys Tyr Ile Tyr
385 390 395 400

Asp Ser Gly Gln Gln His Val Glu Lys Ala Gln His Phe Asn Ser Lys
405 410 415

Asp Asp Met Ile Glu Val Leu Ile Asn Asp Leu Lys Ala His Asp Arg
420 425 430

Val Leu Val Lys Gly Ser Arg Gly Met Lys Leu Glu Glu Val Val Asn
435 440 445

Ala Leu Ile Ser
450

<210> 27

<211> 399

<212> DNA

<213> Homo sapiens

<400> 27

atgacaatga cagatccaat cgcagatatg cttactcgtg taagaaacgc aaacatggtg 60
cgtcacgaga agttagaatt acctgcatca aatattaaaa aagaaattgc tgaaatctta 120
aagagtgaag gtttcattaa aaatggtgaa tacgtagaag atgataaaca aggtgtactt 180
cgtttattct taaaatatgg tcaaaacgat gagcgtgtta tcacaggatt aaaacgtatt 240
tcaaaaccag gtttacgtgt ttatgcaaaa gctagcgaaa tgcctaaagt attaaatggt 300
ttaggtattg cattagtatc aacttctgaa ggtgtaatca ctgacaaaga agcaagaaaa 360
cgtaatgttg gtggagaaat tatcgcatac gtttggttaa 399

<210> 28

<211> 132

<212> PRT

<213> Homo sapiens

<400> 28

Met Thr Met Thr Asp Pro Ile Ala Asp Met Leu Thr Arg Val Arg Asn
1 5 10 15

Ala Asn Met Val Arg His Glu Lys Leu Glu Leu Pro Ala Ser Asn Ile
20 25 30

Lys Lys Glu Ile Ala Glu Ile Leu Lys Ser Glu Gly Phe Ile Lys Asn
35 40 45

Val Glu Tyr Val Glu Asp Asp Lys Gln Gly Val Leu Arg Leu Phe Leu
50 55 60

Lys Tyr Gly Gln Asn Asp Glu Arg Val Ile Thr Gly Leu Lys Arg Ile
65 70 75 80

Ser Lys Pro Gly Leu Arg Val Tyr Ala Lys Ala Ser Glu Met Pro Lys
85 90 95

Val Leu Asn Gly Leu Gly Ile Ala Leu Val Ser Thr Ser Glu Gly Val
100 105 110

Ile Thr Asp Lys Glu Ala Arg Lys Arg Asn Val Gly Gly Glu Ile Ile
115 120 125

25

<210> 32
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 32
 Val Gly Gln Lys Ile Asn Pro Ile Gly Leu Arg Val Gly Ile Ile Arg
 1 5 10 15
 Asp Trp Glu Ala Lys Trp Tyr Ala Glu Lys Asp Phe Ala Ser Leu Leu
 20 25 30
 His Glu Asp Leu Lys Ile Arg Lys Phe Ile Asp Asn Glu Leu Lys Glu
 35 40 45
 Ala Ser Val Ser His Val Glu Ile Glu Arg Ala Ala Asn Arg Ile Asn
 50 55 60
 Ile Ala Ile His Thr Gly Lys Pro Gly Met Val Ile Gly Lys Gly Gly
 65 70 75 80
 Ser Glu Ile Glu Lys Leu Arg Asn Lys Leu Asn Ala Leu Thr Asp Lys
 85 90 95
 Lys Val His Ile Asn Val Ile Glu Ile Lys Lys Val Asp Leu Asp Ala
 100 105 110
 Arg Leu Val Ala Glu Asn Ile Ala Arg Gln Leu Glu Asn Arg Ala Ser
 115 120 125
 Phe Arg Arg Val Gln Lys Gln Ala Ile Thr Arg Ala Met Lys Leu Gly
 130 135 140
 Ala Lys Gly Ile Lys Thr Gln Val Ser Gly Arg Leu Gly Gly Ala Asp
 145 150 155 160
 Ile Ala Arg Ala Glu Gln Tyr Ser Glu Gly Thr Val Pro Leu His Thr
 165 170 175
 Leu Arg Ala Asp Ile Asp Tyr Ala His Ala Glu Ala Asp Thr Thr Tyr
 180 185 190
 Gly Lys Leu Gly Val Lys Val Trp Ile Tyr Arg Gly Glu Val Leu Pro
 195 200 205
 Thr Lys Asn Thr Ser Gly Gly Gly Lys
 210 215

<210> 33
 <211> 498
 <212> DNA
 <213> Homo sapiens

<400> 33
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 gtagcaaaaag ttgtaaaagg tggtcgctgt ttccggttca ctgcattagt tgtagttgga 120
 gacaaaaaatg gtcgtgtagg tttcggtact ggtaaagctc aagaggtacc agaagcaatc 180
 aaaaaagctg ttgaagcagc taaaaaagat ttagtagttg ttccacgtgt tgaaggtaca 240

09925637.081001

actccacaca caattactgg ccggttacggt tcaggaagcg tatttatgaa accggctgca 300
 cctggtagag gagttatcgc tgggtggtcct gttcgtgccc tacttgaatt agcaggtatc 360
 actgatatct taagtaaatac attaggatca aacacaccaa tcaacatggt tcgtgctaca 420
 atcgatgggt tacaaaacct taaaaatgct gaagatggtg cgaaattacg tggcaaaaca 480
 gtagaagaat tatacaat 498

<210> 34

<211> 166

<212> PRT

<213> Homo sapiens

<400> 34

Met Ala Arg Arg Glu Glu Glu Thr Lys Glu Phe Glu Glu Arg Val Val
 1 5 10 15

Thr Ile Asn Arg Val Ala Lys Val Val Lys Gly Gly Arg Arg Phe Arg
 20 25 30

Phe Thr Ala Leu Val Val Val Gly Asp Lys Asn Gly Arg Val Gly Phe
 35 40 45

Gly Thr Gly Lys Ala Gln Glu Val Pro Glu Ala Ile Lys Lys Ala Val
 50 55 60

Glu Ala Ala Lys Lys Asp Leu Val Val Val Pro Arg Val Glu Gly Thr
 65 70 75 80

Thr Pro His Thr Ile Thr Gly Arg Tyr Gly Ser Gly Ser Val Phe Met
 85 90 95

Lys Pro Ala Ala Pro Gly Thr Gly Val Ile Ala Gly Gly Pro Val Arg
 100 105 110

Ala Val Leu Glu Leu Ala Gly Ile Thr Asp Ile Leu Ser Lys Ser Leu
 115 120 125

Gly Ser Asn Thr Pro Ile Asn Met Val Arg Ala Thr Ile Asp Gly Leu
 130 135 140

Gln Asn Leu Lys Asn Ala Glu Asp Val Ala Lys Leu Arg Gly Lys Thr
 145 150 155 160

Val Glu Glu Leu Tyr Asn
 165

<210> 35

<211> 390

<212> DNA

<213> Homo sapiens

<400> 35

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 ttagtaccag gtgaaggtaa catcacagtt aataaccgtg acgtacgcga atacttacca 120
 ttcgaatcat taattttaga cttaaaccac ccatttgatg taactgaaac taaaggtaac 180
 tatgatgttt tagttaacgt tcatggtggt ggtttcactg gacaagctca agctatccgt 240
 cacggaatcg ctcgtgcatt attagaagca gatcctgaat acagagggtc tttaaaacgc 300
 gctggattac ttactcgtga cccacgtatg aaagaacata aaaaaccagg tcttaaagca 360
 gctcgtcgtt cacctcaatt ctcaaaacgt 390

<210> 36
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 36
 Met Ala Gln Val Glu Tyr Arg Gly Thr Gly Arg Arg Lys Asn Ser Val
 1 5 10 15
 Ala Arg Val Arg Leu Val Pro Gly Glu Gly Asn Ile Thr Val Asn Asn
 20 25 30
 Arg Asp Val Arg Glu Tyr Leu Pro Phe Glu Ser Leu Ile Leu Asp Leu
 35 40 45
 Asn Gln Pro Phe Asp Val Thr Glu Thr Lys Gly Asn Tyr Asp Val Leu
 50 55 60
 Val Asn Val His Gly Gly Gly Phe Thr Gly Gln Ala Gln Ala Ile Arg
 65 70 75 80
 His Gly Ile Ala Arg Ala Leu Leu Glu Ala Asp Pro Glu Tyr Arg Gly
 85 90 95
 Ser Leu Lys Arg Ala Gly Leu Leu Thr Arg Asp Pro Arg Met Lys Glu
 100 105 110
 His Lys Lys Pro Gly Leu Lys Ala Ala Arg Arg Ser Pro Gln Phe Ser
 115 120 125
 Lys Arg
 130

<210> 37
 <211> 306
 <212> DNA
 <213> Homo sapiens

<400> 37
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 ccgttaccaa ctgagaaatc agtttacaca atcatccgtg ccgtgcataa gtataaagat 180
 tcacgtgaac aattcgaaca acgtacacac aaacgtttta tcgatattgt aaaccaaca 240
 ccaaaaacag ttgacgcttt aatggggetta aatttaccat ctggtgtaga catcgaaatc 300
 aaatta 306

<210> 38
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 38
 Met Ala Lys Gln Lys Ile Arg Ile Arg Leu Lys Ala Tyr Asp His Arg
 1 5 10 15
 Val Ile Asp Gln Ser Ala Glu Lys Ile Val Glu Thr Ala Lys Arg Ser
 20 25 30
 Gly Ala Asp Val Ser Gly Pro Ile Pro Leu Pro Thr Glu Lys Ser Val

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35 40 45
Tyr Thr Ile Ile Arg Ala Val His Lys Tyr Lys Asp Ser Arg Glu Gln
50 55 60
Phe Glu Gln Arg Thr His Lys Arg Leu Ile Asp Ile Val Asn Pro Thr
65 70 75 80
Pro Lys Thr Val Asp Ala Leu Met Gly Leu Asn Leu Pro Ser Gly Val
85 90 95
Asp Ile Glu Ile Lys Leu
100

<210> 39
<211> 267
<212> DNA
<213> Homo sapiens

<400> 39
atgggctaaga aatctaaaat agcaaaagag agaaaaagag aagagttagt aaataaatat 60
tacgaattac gtaaagagtt aaaagcaaaa ggtgattacg aagcgttaag aaaattacca 120
agagattcat cacctacacg tttaactaga agatgtaaag taactggaag acctagaggt 180
gtattacgta aatttgaaat gtctcgtatt gcgttttagag aacatgcgca caaaggacaa 240
attccagggtg ttaaaaaatc aagttgg 267

<210> 40
<211> 89
<212> PRT
<213> Homo sapiens

<400> 40
Met Ala Lys Lys Ser Lys Ile Ala Lys Glu Arg Lys Arg Glu Glu Leu
1 5 10 15
Val Asn Lys Tyr Tyr Glu Leu Arg Lys Glu Leu Lys Ala Lys Gly Asp
20 25 30

~~Tyr Glu Ala Leu Arg Lys Leu Pro Arg Asp Ser Ser Pro Thr Arg Leu~~
35 40 45

Thr Arg Arg Cys Lys Val Thr Gly Arg Pro Arg Gly Val Leu Arg Lys
50 55 60

Phe Glu Met Ser Arg Ile Ala Phe Arg Glu His Ala His Lys Gly Gln
65 70 75 80

Ile Pro Gly Val Lys Lys Ser Ser Trp
85

<210> 41
<211> 276
<212> DNA
<213> Homo sapiens

<400> 41
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gctcaagaag gaagcgaaaa gaaacaagta atcaaaacat ggtcacgtcg ttctacaatt 120

ttccctaatt tcacgggaca tacttttgca gtatacgacg gacgtaaaca cgtacctgta 180
 tatgtaactg aagatatggt aggtcataaa ttaggtgagt ttgctcctac tcgtacattc 240
 aaaggacacg ttgcagacga caagaaaaca agaaga 276

<210> 42
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 42
 Met Ala Arg Ser Ile Lys Lys Gly Pro Phe Val Asp Glu His Leu Met
 1 5 10 15
 Lys Lys Val Glu Ala Gln Glu Gly Ser Glu Lys Lys Gln Val Ile Lys
 20 25 30
 Thr Trp Ser Arg Arg Ser Thr Ile Phe Pro Asn Phe Ile Gly His Thr
 35 40 45
 Phe Ala Val Tyr Asp Gly Arg Lys His Val Pro Val Tyr Val Thr Glu
 50 55 60
 Asp Met Val Gly His Lys Leu Gly Glu Phe Ala Pro Thr Arg Thr Phe
 65 70 75 80
 Lys Gly His Val Ala Asp Asp Lys Lys Thr Arg Arg
 85 90

<210> 43
 <211> 183
 <212> DNA
 <213> Homo sapiens

<400> 43
 atggctaataa cttcaatggt tgctaagcaa caaaaaaac aaaaatatgc agttcgtgaa 60
 tacactcggt gtgaacgttg tggcgcgtcca cattctgtat atcgtaaatt taaattatgc 120
 cgtatttggt tccgtgaatt agcttacaaa ggccaaatcc ctggcgttcg taaagctagc 180
 tgg 183

<210> 44
 <211> 61
 <212> PRT
 <213> Homo sapiens

<400> 44
 Met Ala Lys Thr Ser Met Val Ala Lys Gln Gln Lys Lys Gln Lys Tyr
 1 5 10 15
 Ala Val Arg Glu Tyr Thr Arg Cys Glu Arg Cys Gly Arg Pro His Ser
 20 25 30
 Val Tyr Arg Lys Phe Lys Leu Cys Arg Ile Cys Phe Arg Glu Leu Ala
 35 40 45
 Tyr Lys Gly Gln Ile Pro Gly Val Arg Lys Ala Ser Trp
 50 55 60

<210> 45

<211> 699
 <212> DNA
 <213> Homo sapiens

<400> 45
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 aacttaaaaa aagaaggata cgatgtgtac tgtgcatacg atggtaatga tgcagtcgac 120
 ttaatttatg aagaagaacc agacatcgta ttactagata tcatgttacc tggtcgtgat 180
 ggtatggaag tatgtcgtga agtgcgcaaa aaatacgaaa tgccaataat aatgcttact 240
 gctaaagatt cagaaattga taaagtgtt ggtttagaac taggtgcaga tgactatgta 300
 acgaaaccgt ttagtacgcg tgaattaatc gcacgtgtga aagcgaactt acgtcgtcat 360
 tactcacaac cagcacaaga cactggaaat gtaacgaatg aaatcacaat taaagatatt 420
 gtgatttatc cagacgcata ttctattaaa aaacgtggcg aagatattga attaacacat 480
 cgtgaatttg aattgttcca ttatttatca aaacatatgg gacaagtaat gacacgtgaa 540
 catttattac aaacagtatg gggctatgat tactttggcg atgtacgtac ggtcgatgta 600
 acgattcgtc gtttacgtga aaagattgaa gatgatccgt cacatcctga atatattgtg 660
 acgcgtagag gcgttgata tttcctccaa caacatgag 699

<210> 46
 <211> 233
 <212> PRT
 <213> Homo sapiens

<400> 46
 Met Ala Arg Lys Val Val Val Val Asp Asp Glu Lys Pro Ile Ala Asp
 1 5 10 15
 Ile Leu Glu Phe Asn Leu Lys Lys Glu Gly Tyr Asp Val Tyr Cys Ala
 20 25 30
 Tyr Asp Gly Asn Asp Ala Val Asp Leu Ile Tyr Glu Glu Glu Pro Asp
 35 40 45
 Ile Val Leu Leu Asp Ile Met Leu Pro Gly Arg Asp Gly Met Glu Val
 50 55 60
 Cys Arg Glu Val Arg Lys Lys Tyr Glu Met Pro Ile Ile Met Leu Thr
 65 70 75 80
 Ala Lys Asp Ser Glu Ile Asp Lys Val Leu Gly Leu Glu Leu Gly Ala
 85 90 95
 Asp Asp Tyr Val Thr Lys Pro Phe Ser Thr Arg Glu Leu Ile Ala Arg
 100 105 110
 Val Lys Ala Asn Leu Arg Arg His Tyr Ser Gln Pro Ala Gln Asp Thr
 115 120 125
 Gly Asn Val Thr Asn Glu Ile Thr Ile Lys Asp Ile Val Ile Tyr Pro
 130 135 140
 Asp Ala Tyr Ser Ile Lys Lys Arg Gly Glu Asp Ile Glu Leu Thr His
 145 150 155 160
 Arg Glu Phe Glu Leu Phe His Tyr Leu Ser Lys His Met Gly Gln Val
 165 170 175
 Met Thr Arg Glu His Leu Leu Gln Thr Val Trp Gly Tyr Asp Tyr Phe
 180 185 190

Gly Asp Val Arg Thr Val Asp Val Thr Ile Arg Arg Leu Arg Glu Lys
195 200 205

Ile Glu Asp Asp Pro Ser His Pro Glu Tyr Ile Val Thr Arg Arg Gly
210 215 220

Val Gly Tyr Phe Leu Gln Gln His Glu
225 230

<210> 47

<211> 937

<212> DNA

<213> Homo sapiens

<400> 47

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tccaaatggt acgagcgaga ttattaatgg accatatcaa ggtcaaacaat tagaccgtat 180
ttggtcagaa catcgtgaat tgtttggtga tttccaagc aaagattttc cgcttctaac 240
taaaatagt gatgcaagag aatcactttc tttcatgtg caccctgata attcttatgc 300
ttatgagcat gaaaacgggc aatatggcaa atctgaatgt tggatatatta tagatgcaga 360
agaagatgca gaaatagtta tagggacatt agcagagtct agagaagaag ttgcgaatca 420
tggtcaacac ggaacgatag agtcgatact tagatatatt aaagtaaaac ctggagaatt 480
ctattttatt ccagcaggaa cagtwcatac tatttcttca ggaatattag catacgaaac 540
gatgcaatcg tcagacatta catatagact ttatgatttc aatcgtcaag ataataata 600
taatgataga ccgttaaata ttgaaaaagc ttttagacgtt attcagtaca atgcaccatt 660
acctaataat ttgcctgaaa gcgaaattat tgaaaacat aagtgtacac acattgtatc 720
gaatgatttc tttacattgg ttaaattggga aatttctggc acgttaaatt atatgaagcc 780
tagagagttc tgtttagtta cagtgttgga aggcgaaggg caaatgattg tctatggtga 840
aattttcaaa ctgactactg gtacaaactt tattttgact tctgaagatt tggatagtgt 900
ctttgaaggt gatttcacat tgatgattag ctatgtg 937
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<210> 48

<211> 312

<212> PRT

<213> Homo sapiens

<400> 48

Met Pro Leu Phe Leu Gln Pro Ile Leu Lys Thr Lys Leu Trp Gly Gly
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Gln Arg Leu Ser Glu Phe Gly Tyr Gln Leu Asp Asn Asp Thr Thr Gly
20 25 30

Glu Cys Trp Cys Val Ser Ala His Pro Asn Gly Thr Ser Glu Ile Ile
35 40 45

Asn Gly Pro Tyr Gln Gly Gln Thr Leu Asp Arg Ile Trp Ser Glu His
50 55 60

Arg Glu Leu Phe Gly Asp Phe Pro Ser Lys Asp Phe Pro Leu Leu Thr
65 70 75 80

Lys Ile Val Asp Ala Arg Glu Ser Leu Ser Ile His Val His Pro Asp
85 90 95

Asn Ser Tyr Ala Tyr Glu His Glu Asn Gly Gln Tyr Gly Lys Ser Glu
100 105 110

Cys Trp Tyr Ile Ile Asp Ala Glu Glu Asp Ala Glu Ile Val Ile Gly
115 120 125

Thr Leu Ala Glu Ser Arg Glu Glu Val Ala Asn His Val Gln His Gly
130 135 140

Thr Ile Glu Ser Ile Leu Arg Tyr Ile Lys Val Lys Pro Gly Glu Phe
145 150 155 160

Tyr Phe Ile Pro Ala Gly Thr Val His Thr Ile Ser Ser Gly Ile Leu
165 170 175

Ala Tyr Glu Thr Met Gln Ser Ser Asp Ile Thr Tyr Arg Leu Tyr Asp
180 185 190

Phe Asn Arg Gln Asp Asn Gln Tyr Asn Asp Arg Pro Leu Asn Ile Glu
195 200 205

Lys Ala Leu Asp Val Ile Gln Tyr Asn Ala Pro Leu Pro Asn Ile Leu
210 215 220

Pro Glu Ser Glu Ile Ile Glu Asn His Lys Cys Thr His Ile Val Ser
225 230 235 240

Asn Asp Phe Phe Thr Leu Val Lys Trp Glu Ile Ser Gly Thr Leu Asn
245 250 255

Tyr Met Lys Pro Arg Glu Phe Cys Leu Val Thr Val Leu Glu Gly Glu
260 265 270

Gly Gln Met Ile Val Asp Gly Glu Ile Phe Lys Leu Thr Thr Gly Thr
275 280 285

Asn Phe Ile Leu Thr Ser Glu Asp Leu Asp Ser Val Phe Glu Gly Asp
290 295 300

Phe Thr Leu Met Ile Ser Tyr Val
305 310

<210> 49

<211> 837

<212> DNA

<213> Homo sapiens

<400> 49

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aaactgtgta atcattatga tattccaact ccattaaagt catatcacga acataacaag 180
gataagcaga ctgcttttat cattgaacag ttagaattag gtcttgacgt tgcgctcgta 240
tctgatgctg gattgccctt aattagtgtat cctggatacg aattagtagt ggcagccaga 300
gaagctaata ttaaagtaga gactgtgcct ggacctaatt ctgggctgac ggctttgatg 360
gctagtggat taccttcata tgtatataca ttttaggat ttttgccacg aaaagagaaa 420
gaaaaaagtg ctgtattaga gcaacgtatg catgaaaata gcacattaat tatatacgaa 480
tcaccgcacg gtgtgacaga tacattaaaa acaattgcaa agatagatgc aacacgacaa 540
gtatcactag ggcgtgaatt aactaagaag ttcgaacaaa ttgtaactga tgatgtaaca 600
caattacaag cattgattca gcaaggcgat gtaccattga aaggcgaatt cgttatctta 660
attgaagggtg ctaaagcgaa caatgagata tctgtggtttg atgattttatc tatcaatgag 720
catgttgatc atttatattca aacttcacag atgaaaccaa aacaagctat taaaaaagtt 780
gctgaagaac gacaacttaa aacgaatgaa gtatataata tttatcatca aataagt 837

<210> 50
 <211> 279
 <212> PRT
 <213> Homo sapiens

<400> 50

Met Ala Val Leu Tyr Leu Val Gly Thr Pro Ile Gly Asn Leu Ala Asp
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Ile Thr Tyr Arg Ala Val Asp Val Leu Lys Arg Val Asp Met Ile Ala
 20 25 30

Cys Glu Asp Thr Arg Val Thr Ser Lys Leu Cys Asn His Tyr Asp Ile
 35 40 45

Pro Thr Pro Leu Lys Ser Tyr His Glu His Asn Lys Asp Lys Gln Thr
 50 55 60

Ala Phe Ile Ile Glu Gln Leu Glu Leu Gly Leu Asp Val Ala Leu Val
 65 70 75 80

Ser Asp Ala Gly Leu Pro Leu Ile Ser Asp Pro Gly Tyr Glu Leu Val
 85 90 95

Val Ala Ala Arg Glu Ala Asn Ile Lys Val Glu Thr Val Pro Gly Pro
 100 105 110

Asn Ala Gly Leu Thr Ala Leu Met Ala Ser Gly Leu Pro Ser Tyr Val
 115 120 125

Tyr Thr Phe Leu Gly Phe Leu Pro Arg Lys Glu Lys Glu Lys Ser Ala
 130 135 140

Val Leu Glu Gln Arg Met His Glu Asn Ser Thr Leu Ile Ile Tyr Glu
 145 150 155 160

Ser Pro His Arg Val Thr Asp Thr Leu Lys Thr Ile Ala Lys Ile Asp
 165 170 175

Ala Thr Arg Gln Val Ser Leu Gly Arg Glu Leu Thr Lys Lys Phe Glu
 180 185 190

Gln Ile Val Thr Asp Asp Val Thr Gln Leu Gln Ala Leu Ile Gln Gln
 195 200 205

Gly Asp Val Pro Leu Lys Gly Glu Phe Val Ile Leu Ile Glu Gly Ala
 210 215 220

Lys Ala Asn Asn Glu Ile Ser Trp Phe Asp Asp Leu Ser Ile Asn Glu
 225 230 235 240

His Val Asp His Tyr Ile Gln Thr Ser Gln Met Lys Pro Lys Gln Ala
 245 250 255

Ile Lys Lys Val Ala Glu Glu Arg Gln Leu Lys Thr Asn Glu Val Tyr
 260 265 270

Asn Ile Tyr His Gln Ile Ser
 275

09925637.081001

<210> 51
 <211> 624
 <212> DNA
 <213> Homo sapiens

<400> 51
 atgaaatttg gaaaaacaat cgcagtagta ttagcatcta gtgtcttgct tgcaggatgt 60
 actacggata aaaaagaaat taaggcatat ttaaagcaag tggataaaat taaagatgat 120
 gaagaaccaa ttaaaactgt tggtaagaaa attgctgaat tagatgagaa aaagaaaaaa 180
 ttaactgaag atgtcaatag taaagatata gcagttcgcg gtaaagcagt aaaggattta 240
 attaaaaatg ccgatgatcg tctaaaggaa tttgaaaaag aagaagacgc aattaagaag 300
 tctgaacaag actttaagaa agcaaaaagt cacgttgata acattgataa tgatgttaaa 360
 cgtaaagaag taaaacaatt agatgatgta ttaaaagaaa aatataagtt acacagtgat 420
 tacgcgaaaag catataaaaa ggctgtaaac tcagagaaaa cattatttaa atattttaa 480
 caaaatgacg cgacacaaca aggtgttaac gaaaaatcaw aagcaataga acagaactat 540
 aaaaagttaa aagaagtatc agataagtat acaaaagtac taaataagggt tggtaaagaa 600
 aagcaagacg ttgatcaatt taaa 624

<210> 52
 <211> 208
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (174)..(174)
 <223> Xaa equals any amino acid

<400> 52
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 Leu Ala Gly Cys Thr Thr Asp Lys Lys Glu Ile Lys Ala Tyr Leu Lys
 20 25 30
 Gln Val Asp Lys Ile Lys Asp Asp Glu Glu Pro Ile Lys Thr Val Gly
 35 40 45
 Lys Lys Ile Ala Glu Leu Asp Glu Lys Lys Lys Lys Leu Thr Glu Asp
 50 55 60
 Val Asn Ser Lys Asp Thr Ala Val Arg Gly Lys Ala Val Lys Asp Leu
 65 70 75 80
 Ile Lys Asn Ala Asp Asp Arg Leu Lys Glu Phe Glu Lys Glu Glu Asp
 85 90 95
 Ala Ile Lys Lys Ser Glu Gln Asp Phe Lys Lys Ala Lys Ser His Val
 100 105 110
 Asp Asn Ile Asp Asn Asp Val Lys Arg Lys Glu Val Lys Gln Leu Asp
 115 120 125
 Asp Val Leu Lys Glu Lys Tyr Lys Leu His Ser Asp Tyr Ala Lys Ala
 130 135 140
 Tyr Lys Lys Ala Val Asn Ser Glu Lys Thr Leu Phe Lys Tyr Leu Asn
 145 150 155 160

Figure 1. The structure of the proposed model.

Figure 1. The structure of the proposed model.

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Figure 1. The structure of the proposed model.

Figure 1. The structure of the proposed model.

Figure 1. The structure of the proposed model.

Leu Glu Arg Leu Arg Phe Val Asp Asp Asp Val Leu Cys Ile Glu Tyr
 130 135 140
 Ser Tyr Tyr His Lys Glu Ile Val Lys Tyr Leu Asn Asp Asp Ile Ala
 145 150 155 160
 Lys Gly Ser Ile Phe Asp Tyr Leu Glu Ser Asn Met Lys Leu Arg Ile
 165 170 175
 Gly Phe Ser Asp Ile Phe Phe Asn Val Asp Gln Leu Thr Ser Ser Glu
 180 185 190
 Ala Ser Leu Leu Gln Leu Ser Thr Gly Glu Pro Cys Leu Arg Tyr His
 195 200 205
 Gln Thr Phe Tyr Thr Met Thr Gly Lys Pro Phe Asp Ser Ser Asp Ile
 210 215 220
 Val Phe His Tyr Arg His Ala Gln Phe Tyr Ile Pro Ser Lys Lys
 225 230 235

<210> 55
 <211> 716
 <212> DNA
 <213> Homo sapiens

<400> 55
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 caaaaacaac agtttcaaac atattatcgt ttacttggtg aatggaatga aaagatgaat 120
 ttgacaagta ttacagatga acacgatgta tatttgaaac atttttatga ttccattgca 180
 cctagttttt attttgattt taatcagcct ataagtatat gtgatgtagg cgctggagct 240
 gggttttccaa gtattccgtt aaaaataaatg tttccgcagt taaaagtgac gattgttgat 300
 tcattaaata agcgtattca atttttaaac catttagcgt cagaattaca attacaggat 360
 gtcagcttta tacacgatag agcagaaaca tttggtaagg gtgtctacag ggagtcttat 420
 gatgttggtta ctgcaagagc agtagctaga ttatccgtgt taagtgaatt gtgtttaccg 480
 ctagttaaaa aaggtggaca gtttggtgca ttaaaatctt caaaagggtga agaagaatta 540
 gaagaagcaa aatttgcaat tagtgtgtta ggtggtaatg ttacagaaac acataccttt 600
 gaattgccag aagatgctgg agagcgccag atgttcatta ttgataaaaa aagacagacg 660
 ccgaaaaagt atccaagaaa accagggacg ctaataagac tcttttactt gaaaaa 716

<210> 56
 <211> 239
 <212> PRT
 <213> Homo sapiens

<400> 56
 Met Thr Val Glu Trp Leu Ala Glu Gln Leu Lys Glu His Asn Ile Gln
 1 5 10 15

Leu Thr Glu Thr Gln Lys Gln Gln Phe Gln Thr Tyr Tyr Arg Leu Leu
 20 25 30

Val Glu Trp Asn Glu Lys Met Asn Leu Thr Ser Ile Thr Asp Glu His
 35 40 45

Asp Val Tyr Leu Lys His Phe Tyr Asp Ser Ile Ala Pro Ser Phe Tyr
 50 55 60

Phe Asp Phe Asn Gln Pro Ile Ser Ile Cys Asp Val Gly Ala Gly Ala

65		70		75		80
Gly Phe Pro Ser Ile Pro Leu Lys Ile Met Phe Pro Gln Leu Lys Val						
	85			90		95
Thr Ile Val Asp Ser Leu Asn Lys Arg Ile Gln Phe Leu Asn His Leu						
	100		105		110	
Ala Ser Glu Leu Gln Leu Gln Asp Val Ser Phe Ile His Asp Arg Ala						
	115		120		125	
Glu Thr Phe Gly Lys Gly Val Tyr Arg Glu Ser Tyr Asp Val Val Thr						
	130		135		140	
Ala Arg Ala Val Ala Arg Leu Ser Val Leu Ser Glu Leu Cys Leu Pro						
	145		150		155	160
Leu Val Lys Lys Gly Gly Gln Phe Val Ala Leu Lys Ser Ser Lys Gly						
		165		170		175
Glu Glu Glu Leu Glu Glu Ala Lys Phe Ala Ile Ser Val Leu Gly Gly						
	180		185		190	
Asn Val Thr Glu Thr His Thr Phe Glu Leu Pro Glu Asp Ala Gly Glu						
	195		200		205	
Arg Gln Met Phe Ile Ile Asp Lys Lys Arg Gln Thr Pro Lys Lys Tyr						
	210		215		220	
Pro Arg Lys Pro Gly Thr Pro Asn Lys Thr Pro Leu Leu Glu Lys						
	225		230		235	

<210> 57

<211> 1191

<212> DNA

<213> Homo sapiens

<400> 57

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gggatata	aatttttaaa	gacacaagat	aaagtttatg	caagaacggt	agatcatcca	120
gttatagaat	cattgcaaga	tgaattaaca	tttcagagtt	ttgaccatgt	ttatgaagca	180
cataaccaat	ttgaagatgt	ctatatattg	attgtggcgc	aattgggtga	agctgcta	240
gaaaaagata	ttgtctatgc	ggttccgggt	caccctagag	ttgctgagac	aactacagtg	300
aaattactgg	ctttagcaaa	ggacaatact	gatatagatg	tgaaagtttt	aggtgggaaa	360
agctttattg	atgatgtgtt	tgaagcagtt	aatgtagatc	caaagtgtgg	cttcacactg	420
ttagatgcga	catcattaca	agaagtaaca	cttaatgtta	gaacgcatac	attgattacg	480
caagtttata	gtgcaatggg	tgctgcta	ttgaaaatca	ctttaatgga	acgatatacct	540
gatgattacc	ctgttcaaat	tgctactggg	gcacgaagcg	atgggtgcgga	taacgtttgtg	600
acatgccc	tatatgaatt	ggatcatgat	gaaaatgcat	tcaataattt	gacgagtgtg	660
ttcgtaccaa	aaatcataac	atcgacatat	ttgtatcatg	actttgattt	tgcaacggaa	720
gtgattgata	ctttagttga	tgaagataaa	ggttgtccat	gggataaagt	gcaaacgcat	780
gmaacgctaa	agcggttatt	acttgaagaa	acatttgaat	tgttcgaagc	tattgacaat	840
gaagatgatt	ggcatatgat	tgaagaacta	ggagataatt	tattacaagt	gttattgcat	900
actagtattg	gtaaaaaaga	agggtatatc	gacattaaag	aagtgtattac	aagtctta	960
gctaaaatga	ttcgtagaca	cccacacata	tttggtgatg	ccaatgctga	aactatcgat	1020
gacttaaaag	aaatttggtc	taaggcgaaa	gatgctgaag	gtaaacagcc	aagagttaaa	1080
tttgaaaaag	tatttgcaga	gcatttttta	aattttatatg	agaagacgaa	ggataagtca	1140
tttgatgagg	ccgcgttaaa	gcagtggcta	gaaaaagggg	agagtaatac	a	1191

<210> 58
 <211> 397
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (261)..(261)
 <223> Xaa equals any amino acid

<400> 58

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Met Ala His Thr Ile Thr Ile Val Gly Leu Gly Asn Tyr Gly Ile Asp
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Asp Leu Pro Leu Gly Ile Tyr Lys Phe Leu Lys Thr Gln Asp Lys Val
      20              25              30

Tyr Ala Arg Thr Leu Asp His Pro Val Ile Glu Ser Leu Gln Asp Glu
      35              40              45

Leu Thr Phe Gln Ser Phe Asp His Val Tyr Glu Ala His Asn Gln Phe
      50              55              60

Glu Asp Val Tyr Ile Asp Ile Val Ala Gln Leu Val Glu Ala Ala Asn
 65              70              75              80

Glu Lys Asp Ile Val Tyr Ala Val Pro Gly His Pro Arg Val Ala Glu
      85              90              95

Thr Thr Thr Val Lys Leu Leu Ala Leu Ala Lys Asp Asn Thr Asp Ile
      100             105             110

Asp Val Lys Val Leu Gly Gly Lys Ser Phe Ile Asp Asp Val Phe Glu
      115             120             125

Ala Val Asn Val Asp Pro Asn Asp Gly Phe Thr Leu Leu Asp Ala Thr
      130             135             140

Ser Leu Gln Glu Val Thr Leu Asn Val Arg Thr His Thr Leu Ile Thr
 145             150             155             160

Gln Val Tyr Ser Ala Met Val Ala Ala Asn Leu Lys Ile Thr Leu Met
      165             170             175

Glu Arg Tyr Pro Asp Asp Tyr Pro Val Gln Ile Val Thr Gly Ala Arg
      180             185             190

Ser Asp Gly Ala Asp Asn Val Val Thr Cys Pro Leu Tyr Glu Leu Asp
      195             200             205

His Asp Glu Asn Ala Phe Asn Asn Leu Thr Ser Val Phe Val Pro Lys
      210             215             220

Ile Ile Thr Ser Thr Tyr Leu Tyr His Asp Phe Asp Phe Ala Thr Glu
 225             230             235             240

Val Ile Asp Thr Leu Val Asp Glu Asp Lys Gly Cys Pro Trp Asp Lys
      245             250             255

Val Gln Thr His Xaa Thr Leu Lys Arg Tyr Leu Leu Glu Glu Thr Phe

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260 265 270

Glu Leu Phe Glu Ala Ile Asp Asn Glu Asp Asp Trp His Met Ile Glu
275 280 285

Glu Leu Gly Asp Ile Leu Leu Gln Val Leu Leu His Thr Ser Ile Gly
290 295 300

Lys Lys Glu Gly Tyr Ile Asp Ile Lys Glu Val Ile Thr Ser Leu Asn
305 310 315 320

Ala Lys Met Ile Arg Arg His Pro His Ile Phe Gly Asp Ala Asn Ala
325 330 335

Glu Thr Ile Asp Asp Leu Lys Glu Ile Trp Ser Lys Ala Lys Asp Ala
340 345 350

Glu Gly Lys Gln Pro Arg Val Lys Phe Glu Lys Val Phe Ala Glu His
355 360 365

Phe Leu Asn Leu Tyr Glu Lys Thr Lys Asp Lys Ser Phe Asp Glu Ala
370 375 380

Ala Leu Lys Gln Trp Leu Glu Lys Gly Glu Ser Asn Thr
385 390 395

<210> 59
<211> 804
<212> DNA
<213> Homo sapiens

<400> 59
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attcacgata gagaggataa gaaaatggct caaatttcta aatataaacg tgtagttttg 120
aaactaagtgt gtgaagcggt agctggagaa aaaggatttg gcataaatcc agtaattatt 180
aaaagtgttg ctgagcaagt ggctgaagt gctaaaatgg actgtgaaat cgcagtaatc 240
gttggtggcg gaaacatttg gagaggtaaa acaggtagtg acttaggtat ggaccgtgga 300
actgctgatt acatgggtat gcttgcaact gtaatgaatg ccttagcatt acaagatagt 360
ttagaacaat tggattgtga tacacgagta ttaacatcta ttgaaatgaa gcaagtggct 420
gaaccttata ttcgtcgtcg tgcaattaga cacttagaaa agaaacgcgt agttattttt 480
gctgcaggta ttggaaaccc atacttctct acagatacta cagcggcatt acgtgctgca 540
gaagttgaag cagatgttat tttaatgggc aaaaataatg tagatgggtg atattctgca 600
gatcctaag taaacaaaga tgcggtaaaa tatgaacatt taacgcatat tcaaatgctt 660
caagaagggt tacaagtaat ggattcaaca gcatcctcat tctgtatgga taataacatt 720
ccgttaactg ttttctctat tatggaagaa ggaaatatta aacgtgctgt tatgggtgaa 780
aagataggta cgttaattac aaaa 804

<210> 60
<211> 268
<212> PRT
<213> Homo sapiens

<400> 60
Asn Val Asn His Ser Asn Lys Thr Thr Thr Val Ser Ser Leu Leu Val
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Tyr Val Thr Tyr Ile His Asp Arg Glu Asp Lys Lys Met Ala Gln Ile
20 25 30

Ser Lys Tyr Lys Arg Val Val Leu Lys Leu Ser Gly Glu Ala Leu Ala
 35 40 45
 Gly Glu Lys Gly Phe Gly Ile Asn Pro Val Ile Ile Lys Ser Val Ala
 50 55 60
 Glu Gln Val Ala Glu Val Ala Lys Met Asp Cys Glu Ile Ala Val Ile
 65 70 75 80
 Val Gly Gly Gly Asn Ile Trp Arg Gly Lys Thr Gly Ser Asp Leu Gly
 85 90 95
 Met Asp Arg Gly Thr Ala Asp Tyr Met Gly Met Leu Ala Thr Val Met
 100 105 110
 Asn Ala Leu Ala Leu Gln Asp Ser Leu Glu Gln Leu Asp Cys Asp Thr
 115 120 125
 Arg Val Leu Thr Ser Ile Glu Met Lys Gln Val Ala Glu Pro Tyr Ile
 130 135 140
 Arg Arg Arg Ala Ile Arg His Leu Glu Lys Lys Arg Val Val Ile Phe
 145 150 155 160
 Ala Ala Gly Ile Gly Asn Pro Tyr Phe Ser Thr Asp Thr Thr Ala Ala
 165 170 175
 Leu Arg Ala Ala Glu Val Glu Ala Asp Val Ile Leu Met Gly Lys Asn
 180 185 190
 Asn Val Asp Gly Val Tyr Ser Ala Asp Pro Lys Val Asn Lys Asp Ala
 195 200 205
 Val Lys Tyr Glu His Leu Thr His Ile Gln Met Leu Gln Glu Gly Leu
 210 215 220
 Gln Val Met Asp Ser Thr Ala Ser Ser Phe Cys Met Asp Asn Asn Ile
 225 230 235 240
 Pro Leu Thr Val Phe Ser Ile Met Glu Glu Gly Asn Ile Lys Arg Ala
 245 250 255
 Val Met Gly Glu Lys Ile Gly Thr Leu Ile Thr Lys
 260 265

<210> 61

<211> 1068

<212> DNA

<213> Homo sapiens

<400> 61

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 atttatatta ccaatgatgg tgattggaga aagcaaaata atattacagc tgaaattaaa 180
 tctactgatg agcttcattt agaaaatgga gaggcgcttg agatttcaca gctattgaaa 240
 gaaagtagtt caggacaacc atacgatgca gtattcccat tattacatgg tcctaattgg 300
 gaagatggca cgattcaagg gctttttgaa gttttggatg taccatatgt aggaaatgg 360
 gtattgtcag ctgcaagttc tatggacaaa cttgtaatga aacaattatt tgaacatcga 420
 gggttaccac agttaccta tattagtttc ttacgttctg aatatgaaaa atatgaacat 480

aacatttttaa aattagtaaa tgataaatta aattaccag tctttgttaa acctgctaac 540
 ttaggggtcaa gtgtaggtat cagtaaagt aataatgaag cggaacttaa agaaggtatt 600
 aaagaagcat tccaatttga ccgtaagctt gttatagaac aaggcgtaa cgcacgtgaa 660
 attgaagtag cagtttttagg aaatgactat cctgaagcga catggccagg tgaagtcgta 720
 aaagatgtcg cgttttacga ttacaaatca aaatataaag atggtaaggt tcaattacaa 780
 attccagctg acttagacga agatgttcaa ttaacgctta gaaatattggc attagaggca 840
 ttcaaagcga cagattgttc tggtttagtc cgtgctgatt tctttgtaac agaagacaac 900
 caaatatata ttaatgaaac aaatgcaatg cctggattta cggctttcag tatgtatcca 960
 aagttatggg aaaatatggg cttatcttat ccagaattga ttacaaaact tatcgagctt 1020
 gctaaagaac gtcaccagga taaacagaaa aataaataca aaattgac 1068

<210> 62
 <211> 356
 <212> PRT
 <213> Homo sapiens

<400> 62
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 His Glu Val Ser Ile Leu Thr Ala Gln Asn Val Leu Asn Ala Ile Asp
 20 25 30
 Lys Asp Lys Tyr His Val Asp Ile Ile Tyr Ile Thr Asn Asp Gly Asp
 35 40 45
 Trp Arg Lys Gln Asn Asn Ile Thr Ala Glu Ile Lys Ser Thr Asp Glu
 50 55 60
 Leu His Leu Glu Asn Gly Glu Ala Leu Glu Ile Ser Gln Leu Leu Lys
 65 70 75 80
 Glu Ser Ser Ser Gly Gln Pro Tyr Asp Ala Val Phe Pro Leu Leu His
 85 90 95
 Gly Pro Asn Gly Glu Asp Gly Thr Ile Gln Gly Leu Phe Glu Val Leu
 100 105 110
 Asp Val Pro Tyr Val Gly Asn Gly Val Leu Ser Ala Ala Ser Ser Met
 115 120 125
 Asp Lys Leu Val Met Lys Gln Leu Phe Glu His Arg Gly Leu Pro Gln
 130 135 140
 Leu Pro Tyr Ile Ser Phe Leu Arg Ser Glu Tyr Glu Lys Tyr Glu His
 145 150 155 160
 Asn Ile Leu Lys Leu Val Asn Asp Lys Leu Asn Tyr Pro Val Phe Val
 165 170 175
 Lys Pro Ala Asn Leu Gly Ser Ser Val Gly Ile Ser Lys Cys Asn Asn
 180 185 190
 Glu Ala Glu Leu Lys Glu Gly Ile Lys Glu Ala Phe Gln Phe Asp Arg
 195 200 205
 Lys Leu Val Ile Glu Gln Gly Val Asn Ala Arg Glu Ile Glu Val Ala
 210 215 220
 Val Leu Gly Asn Asp Tyr Pro Glu Ala Thr Trp Pro Gly Glu Val Val

Ser	Met	Leu	Tyr	Ser	Leu	Asn	Ala	Gly	Gly	Lys	Arg	Ile	Arg	Pro	Val
		35					40					45			
Leu	Leu	Leu	Leu	Thr	Leu	Asp	Ser	Leu	Asn	Thr	Glu	Tyr	Glu	Leu	Gly
	50					55					60				
Met	Lys	Ser	Ala	Ile	Ala	Leu	Glu	Met	Ile	His	Thr	Tyr	Ser	Leu	Ile
65					70					75					80
His	Asp	Asp	Leu	Pro	Ala	Met	Asp	Asn	Asp	Asp	Tyr	Arg	Arg	Gly	Lys
				85					90					95	
Leu	Thr	Asn	His	Lys	Val	Tyr	Gly	Glu	Trp	Thr	Ala	Ile	Leu	Ala	Gly
			100					105					110		
Asp	Ala	Leu	Leu	Thr	Lys	Ala	Phe	Glu	Leu	Ile	Ser	Ser	Asp	Asp	Arg
		115					120					125			
Leu	Thr	Asp	Glu	Val	Lys	Ile	Lys	Val	Leu	Gln	Arg	Leu	Ser	Ile	Ala
	130					135					140				
Ser	Gly	His	Val	Gly	Met	Val	Gly	Gly	Gln	Met	Leu	Asp	Met	Gln	Ser
145					150				155						160
Glu	Gly	Gln	Pro	Ile	Asp	Leu	Glu	Thr	Leu	Glu	Met	Ile	His	Lys	Thr
				165					170					175	
Lys	Thr	Gly	Ala	Leu	Leu	Thr	Phe	Ala	Val	Met	Ser	Ala	Ala	Asp	Ile
			180					185					190		
Ala	Asn	Val	Asp	Asp	Thr	Thr	Lys	Glu	His	Leu	Glu	Ser	Tyr	Ser	Tyr
		195					200					205			
His	Leu	Gly	Met	Met	Phe	Gln	Ile	Lys	Asp	Asp	Leu	Leu	Asp	Cys	Tyr
	210					215					220				
Gly	Asp	Glu	Ala	Lys	Leu	Gly	Lys	Lys	Val	Gly	Ser	Asp	Leu	Glu	Asn
225					230					235					240
Asn	Lys	Ser	Thr	Tyr	Val	Ser	Leu	Leu	Gly	Lys	Asp	Gly	Ala	Glu	Asp
				245					250					255	
Lys	Leu	Thr	Tyr	His	Arg	Asp	Ala	Ala	Val	Asp	Glu	Leu	Thr	Gln	Ile
			260					265					270		
Asp	Glu	Gln	Phe	Asn	Thr	Lys	His	Leu	Leu	Glu	Ile	Val	Asp	Leu	
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<210> 65
<211> 819
<212> DNA
<213> Homo sapiens

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<221> misc_feature
<222> (811)..(811)
<223> n equals a, t, g, or c
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<400> 65
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gttgagtcgc cattagagtt aattcatatg gcaacacttg ttcattgatga cgttattgat 120
aaaagcgaca agcgtcgagg caagttaacc atatcaaaga aatgggatca gacaactgct 180
attttaactg ggaatttttt attggcatta ggacttgaac acttaatggc cgtaaagat 240
aatcgtgtac atcaattgat atctgaatct atcgttgatg tttgtagagg ggaacttttc 300
caatttcaag accaatttaa cagtcaacag acaattatta attatttacg acgtatcaat 360
cgcaaaacag cactgttaat tcaaatatca actgaagttg gtgcaattac ttctcaatct 420
gataaagaga ctgtacgaaa attgaaaatg attgggtcatt atataggtat gagcttccaa 480
atcattgatg atgtattaga cttcacaagt accgaaaaga aattaggtaa gccggtcgga 540
agtgatttgc ttaatgggtca tattacgtta ccgattttat tagaaatgcg taaaaatcca 600
gacttcaaat tgaaaatcga acagttacgt cgtgatagtg aacgcaaaga atttgaagaa 660
tgtatccaaa tcattagaaa atctgacagc atcgatgagg ctaaggcagt aagttcgaag 720
tatttaagta aagcyttgaa tttgatttcy gagttaccag atggacatcc gagatcacta 780
cytttaagtt tgacgaaaaa aatgggttca anaaacacg 819

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<210> 66
<211> 273
<212> PRT
<213> Homo sapiens

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<220>
<221> MISC_FEATURE
<222> (261)..(261)
<223> Xaa equals any amino acid

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<220>
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<222> (271)..(271)
<223> Xaa equals any amino acid

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<400> 66
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Gln Thr Tyr Gln Val Ala Val Ala Leu Glu Leu Ile His Met Ala Thr
      20             25             30

Leu Val His Asp Asp Val Ile Asp Lys Ser Asp Lys Arg Arg Gly Lys
      35             40             45

Leu Thr Ile Ser Lys Lys Trp Asp Gln Thr Thr Ala Ile Leu Thr Gly
      50             55             60

Asn Phe Leu Leu Ala Leu Gly Leu Glu His Leu Met Ala Val Lys Asp
      65             70             75             80

Asn Arg Val His Gln Leu Ile Ser Glu Ser Ile Val Asp Val Cys Arg
      85             90             95

Gly Glu Leu Phe Gln Phe Gln Asp Gln Phe Asn Ser Gln Gln Thr Ile
      100            105            110

Ile Asn Tyr Leu Arg Arg Ile Asn Arg Lys Thr Ala Leu Leu Ile Gln
      115            120            125

Ile Ser Thr Glu Val Gly Ala Ile Thr Ser Gln Ser Asp Lys Glu Thr
      130            135            140

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Val Arg Lys Leu Lys Met Ile Gly His Tyr Ile Gly Met Ser Phe Gln
145 150 155 160

Ile Ile Asp Asp Val Leu Asp Phe Thr Ser Thr Glu Lys Lys Leu Gly
165 170 175

Lys Pro Val Gly Ser Asp Leu Leu Asn Gly His Ile Thr Leu Pro Ile
180 185 190

Leu Leu Glu Met Arg Lys Asn Pro Asp Phe Lys Leu Lys Ile Glu Gln
195 200 205

Leu Arg Arg Asp Ser Glu Arg Lys Glu Phe Glu Glu Cys Ile Gln Ile
210 215 220

Ile Arg Lys Ser Asp Ser Ile Asp Glu Ala Lys Ala Val Ser Ser Lys
225 230 235 240

Tyr Leu Ser Lys Ala Leu Asn Leu Ile Ser Glu Leu Pro Asp Gly His
245 250 255

Pro Arg Ser Leu Xaa Leu Ser Leu Thr Lys Lys Met Gly Ser Xaa Asn
260 265 270

Thr

<210> 67

<211> 504

<212> DNA

<213> Homo sapiens

<400> 67

gtaaattata ttatgaattt gcctgtcaat ttcttaaaga cattcttacc ggaactaatt 60
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gaagcaatta ataatgcyma agaaaagaca gctaataata ccggcttaaa attaataatt 180
gcaattaatt atgggtggcag agcagaactt gttcatagta ttaaaaatat gtttgacgag 240
cttcatcaac aagggtttaa tagtgatata atagatgaaa catatataaa caatcattta 300
atgacaaaag actatcctga tccagagttg ttaattcgta cttcaggaga acaaagaata 360
agtaatttct tgatttggca agtttcgtat agtgaattta tctttaatca aaaattatgg 420
cctgactttg acgaagatga attaattaaa tgtataaaaa tttatcagtc acgtcaaaga 480
cgctttggcg gattgagtga ggag 504

<210> 68

<211> 168

<212> PRT

<213> Homo sapiens

<220>

<221> MISC_FEATURE

<222> (47)..(47)

<223> Xaa equals any amino acid

<400> 68

Val Asn Tyr Ile Met Asn Leu Pro Val Asn Phe Leu Lys Thr Phe Leu
1 5 10 15

Pro Glu Leu Ile Glu Lys Asn Val Lys Val Glu Thr Ile Gly Phe Thr
20 25 30


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tttataatcg aatgacgatt cgtattaaag ataatggcat tggtattcct atcaataaag 1620
tcgataagat attcgaccga ttctatcgtag tagataaggc acgtacgcgt aaaatgggtg 1680
gtactggatt aggactagcc atttcgaaag agattgtgga agcgcacaat ggtcgtattt 1740
gggcaaacag tgtagaaggt caaggtagcat ctatctttat cacacttcca tgtgaagtca 1800
ttgaagacgg tgattgggat gaa 1823

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<210> 70
<211> 608
<212> PRT
<213> Homo sapiens

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<400> 70
Met Lys Trp Leu Lys Gln Leu Gln Ser Leu His Thr Lys Phe Val Ile
  1              5              10              15

Val Tyr Val Leu Leu Ile Ile Ile Gly Met Gln Ile Ile Gly Leu Tyr
      20              25              30

Phe Thr Asn Asn Leu Glu Lys Glu Leu Leu Asp Asn Phe Lys Lys Asn
      35              40              45

Ile Thr Gln Tyr Ala Lys Gln Leu Glu Ile Ser Ile Glu Lys Val Tyr
      50              55              60

Asp Glu Lys Gly Ser Val Asn Ala Gln Lys Asp Ile Gln Asn Leu Leu
      65              70              75              80

Ser Glu Tyr Ala Asn Arg Gln Glu Ile Gly Glu Ile Arg Phe Ile Asp
      85              90              95

Lys Asp Gln Ile Ile Ile Ala Thr Thr Lys Gln Ser Asn Arg Ser Leu
      100             105             110

Ile Asn Gln Lys Ala Asn Asp Ser Ser Val Gln Lys Ala Leu Ser Leu
      115             120             125

Gly Gln Ser Asn Asp His Leu Ile Leu Lys Asp Tyr Gly Gly Gly Lys
      130             135             140

Asp Arg Val Trp Val Tyr Asn Ile Pro Val Lys Val Asp Lys Lys Val
      145             150             155             160

Ile Gly Asn Ile Tyr Ile Glu Ser Lys Ile Asn Asp Val Tyr Asn Gln
      165             170             175

Leu Asn Asn Ile Asn Gln Ile Phe Ile Val Gly Thr Ala Ile Ser Leu
      180             185             190

Leu Ile Thr Val Ile Leu Gly Phe Phe Ile Ala Arg Thr Ile Thr Lys
      195             200             205

Pro Ile Thr Asp Met Arg Asn Gln Thr Val Glu Met Ser Arg Gly Asn
      210             215             220

Tyr Thr Gln Arg Val Lys Ile Tyr Gly Asn Asp Glu Ile Gly Glu Leu
      225             230             235             240

Ala Leu Ala Phe Asn Asn Leu Ser Lys Arg Val Gln Glu Ala Gln Ala
      245             250             255

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Asn	Thr	Glu	Ser	Glu	Lys	Arg	Arg	Leu	Asp	Ser	Val	Ile	Thr	His	Met	
			260					265					270			
Ser	Asp	Gly	Ile	Ile	Ala	Thr	Asp	Arg	Arg	Gly	Arg	Ile	Arg	Ile	Val	
		275					280					285				
Asn	Asp	Met	Ala	Leu	Lys	Met	Leu	Gly	Met	Ala	Lys	Glu	Asp	Ile	Ile	
	290					295					300					
Gly	Tyr	Tyr	Met	Leu	Ser	Val	Leu	Ser	Leu	Glu	Asp	Glu	Phe	Lys	Leu	
305					310					315					320	
Glu	Glu	Ile	Gln	Glu	Asn	Asn	Asp	Ser	Phe	Leu	Leu	Asp	Leu	Asn	Glu	
				325					330					335		
Glu	Glu	Gly	Leu	Ile	Ala	Arg	Val	Asn	Phe	Ser	Thr	Ile	Val	Gln	Glu	
			340					345					350			
Thr	Gly	Phe	Val	Thr	Gly	Tyr	Ile	Ala	Val	Leu	His	Asp	Val	Thr	Glu	
		355					360					365				
Gln	Gln	Gln	Val	Glu	Arg	Glu	Arg	Arg	Glu	Phe	Val	Ala	Asn	Val	Ser	
	370					375					380					
His	Glu	Leu	Arg	Thr	Pro	Leu	Thr	Ser	Met	Asn	Ser	Tyr	Ile	Glu	Ala	
385					390					395					400	
Leu	Glu	Glu	Gly	Ala	Trp	Lys	Asp	Glu	Glu	Leu	Ala	Pro	Gln	Phe	Leu	
				405				410						415		
Ser	Val	Thr	Arg	Glu	Glu	Thr	Glu	Arg	Met	Ile	Arg	Leu	Val	Asn	Asp	
			420					425					430			
Leu	Leu	Gln	Leu	Ser	Lys	Met	Asp	Asn	Glu	Ser	Asp	Gln	Ile	Asn	Lys	
	435					440						445				
Glu	Ile	Ile	Asp	Phe	Asn	Met	Phe	Ile	Asn	Lys	Ile	Ile	Asn	Arg	His	
	450					455					460					
Glu	Met	Ser	Ala	Lys	Asp	Thr	Thr	Phe	Ile	Arg	Asp	Ile	Pro	Lys	Lys	
465					470					475					480	
Thr	Ile	Phe	Thr	Glu	Phe	Asp	Pro	Asp	Lys	Met	Thr	Gln	Val	Phe	Asp	
			485						490					495		
Asn	Val	Ile	Thr	Asn	Ala	Met	Lys	Tyr	Ser	Arg	Gly	Asp	Lys	Arg	Val	
			500					505					510			
Glu	Phe	His	Val	Lys	Gln	Asn	Pro	Leu	Tyr	Asn	Arg	Met	Thr	Ile	Arg	
			515				520					525				
Ile	Lys	Asp	Asn	Gly	Ile	Gly	Ile	Pro	Ile	Asn	Lys	Val	Asp	Lys	Ile	
	530					535					540					
Phe	Asp	Arg	Phe	Tyr	Arg	Val	Asp	Lys	Ala	Arg	Thr	Arg	Lys	Met	Gly	
545					550					555					560	
Gly	Thr	Gly	Leu	Gly	Leu	Ala	Ile	Ser	Lys	Glu	Ile	Val	Glu	Ala	His	
			565					570						575		

Asn Gly Arg Ile Trp Ala Asn Ser Val Glu Gly Gln Gly Thr Ser Ile
580 585 590

Phe Ile Thr Leu Pro Cys Glu Val Ile Glu Asp Gly Asp Trp Asp Glu
595 600 605

<210> 71
<211> 2232
<212> DNA
<213> Homo sapiens

<400> 71
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cattctaattg gtcaagattt agtcatgaag gcaaataaaa agtatttagt taagaatgca 180
caacaaccag aacgaggaaa gatatatgat cgtaattggt aagtgcctagc agaagatgta 240
gaaagatata aacttggttc agtaatatag aaaaaggcga gtgccaattc taaaaaacct 300
aggcatgtag ttgataaaaa agagactgca aagaaattat ctacagtcac taatatgaag 360
ccagaggaaa ttgaaaagag acttagtcaa aagaaagctt tccaaattga atttggacgc 420
aaaggaacaa atttaacgta tcaggacaaa ttgaaaatag agaaaatgaa tttgcctggg 480
atttctttat tgcctgaaac agaacgcttt tatccaaatg gcaattttgc atcacactta 540
attggtagag ctcaagaaaa tccggatact ggtgaactta aaggtgcact tggagttgaa 600
aagatttttg atagttattt aagtggatct aaaggatcat tgagatatat tcatgatatt 660
tggggatata tcgcaccaa tactaaaaaa gagaagcagc ctaaacgtgg tgatgatgtc 720
catttaacaa tcgattcaaa tattcaagta tttggtgaag aagctttaga tggcatgggt 780
gaaagatacc agccgaaaga tttatttgcg gttgtcatgg atgccaaaac tggagaaatt 840
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tgggcacaaatg acctttatca aaacacatac gagcctggat caacatttaa atcatatggg 960
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agagatatta tgggttcacg tatttcagac tgggaatagag tcggttgggg tgaaatccca 1080
atgtcactcg gatttactta ttcattctaat acattgatga tgcatttaca agatttagtt 1140
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atgtttgatg gagaagcacc tgggtcaaatt ggatggagta atgagttgca acaaaaaacg 1260
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agtaaaagac aattttataa agggcaaaaa caaatcgag gcaaaccaat aacaaaagat 1440
actgctgaaa aagttgaaaa gcaattggat ttagttgtga atagtaagaa gagtacgct 1500
gcaaactatc gtattgatgg ttatgaggtc gaaggtaaga ctggtacagc acaagtcgct 1560
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gacgcgccga agaaaaatcc taaagttatt gtatcgctg gtatgagctt ggcacaaaaa 1680
aatgaccaag aagcttatga attaggtgtt agtaaaagcgt ttaaaccaat aatggaaaat 1740
actttgaaat atttaaatgt aggtaaatca aaagatgaca catctaagtc agagtatagt 1800
aaagtgccag atgttgaagg tcaagacaaa caaaaagcta ttgataatgt gagtgcacaa 1860
tcattagaac cagttactat tgggtctggc acacaaataa aagcacaatc tataaaagca 1920
gggaataaaag tcttacctca tagtaaagta ctgttattaa cagatggaga cttactatg 1980
cctgacatgt caggatggac gaaagaagat gtcattgctt ttgaaaacct aacaaatatt 2040
aaagtaaat taaaaggtag cggttttgtg tcccaccaat caattagtaa gggacaaaaa 2100
cttactgaaa aagataaaat agacgtagaa ttttcatcag agaattgtag cagcaattcg 2160
acgaataaatt ctgattcaaa ttcagatgat aagaagaaat ctgacagtaa aactgacaag 2220
gataagtcgg ac 2232

<210> 72
<211> 744
<212> PRT
<213> Homo sapiens

<400> 72

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Leu Leu Val Gly Leu Phe Gly Leu Leu Phe Phe Ile Leu Val Leu Arg
20 25 30

Ile Ser Tyr Ile Met Ile Thr Gly His Ser Asn Gly Gln Asp Leu Val
35 40 45

Met Lys Ala Asn Glu Lys Tyr Leu Val Lys Asn Ala Gln Gln Pro Glu
50 55 60

Arg Gly Lys Ile Tyr Asp Arg Asn Gly Lys Val Leu Ala Glu Asp Val
65 70 75 80

Glu Arg Tyr Lys Leu Val Ala Val Ile Asp Lys Lys Ala Ser Ala Asn
85 90 95

Ser Lys Lys Pro Arg His Val Val Asp Lys Lys Glu Thr Ala Lys Lys
100 105 110

Leu Ser Thr Val Ile Asn Met Lys Pro Glu Glu Ile Glu Lys Arg Leu
115 120 125

Ser Gln Lys Lys Ala Phe Gln Ile Glu Phe Gly Arg Lys Gly Thr Asn
130 135 140

Leu Thr Tyr Gln Asp Lys Leu Lys Ile Glu Lys Met Asn Leu Pro Gly
145 150 155 160

Ile Ser Leu Leu Pro Glu Thr Glu Arg Phe Tyr Pro Asn Gly Asn Phe
165 170 175

Ala Ser His Leu Ile Gly Arg Ala Gln Lys Asn Pro Asp Thr Gly Glu
180 185 190

Leu Lys Gly Ala Leu Gly Val Glu Lys Ile Phe Asp Ser Tyr Leu Ser
195 200 205

Gly Ser Lys Gly Ser Leu Arg Tyr Ile His Asp Ile Trp Gly Tyr Ile
210 215 220

Ala Pro Asn Thr Lys Lys Glu Lys Gln Pro Lys Arg Gly Asp Asp Val
225 230 235 240

His Leu Thr Ile Asp Ser Asn Ile Gln Val Phe Val Glu Glu Ala Leu
245 250 255

Asp Gly Met Val Glu Arg Tyr Gln Pro Lys Asp Leu Phe Ala Val Val
260 265 270

Met Asp Ala Lys Thr Gly Glu Ile Leu Ala Tyr Ser Gln Arg Pro Thr
275 280 285

Phe Asn Pro Glu Thr Gly Lys Asp Phe Gly Lys Lys Trp Ala Asn Asp
290 295 300

Leu Tyr Gln Asn Thr Tyr Glu Pro Gly Ser Thr Phe Lys Ser Tyr Gly
305 310 315 320

09925637 "081001

Leu Ala Ala Ala Ile Gln Glu Gly Ala Phe Asp Pro Asp Lys Lys Tyr
325 330 335

Lys Ser Gly His Arg Asp Ile Met Gly Ser Arg Ile Ser Asp Trp Asn
340 345 350

Arg Val Gly Trp Gly Glu Ile Pro Met Ser Leu Gly Phe Thr Tyr Ser
355 360 365

Ser Asn Thr Leu Met Met His Leu Gln Asp Leu Val Gly Ala Asp Lys
370 375 380

Met Lys Ser Trp Tyr Glu Arg Phe Gly Phe Gly Lys Ser Thr Lys Gly
385 390 395 400

Met Phe Asp Gly Glu Ala Pro Gly Gln Ile Gly Trp Ser Asn Glu Leu
405 410 415

Gln Gln Lys Thr Ser Ser Phe Gly Gln Ser Thr Thr Val Thr Pro Val
420 425 430

Gln Met Leu Gln Ala Gln Ser Ala Phe Phe Asn Asp Gly Asn Met Leu
435 440 445

Lys Pro Trp Phe Val Asn Ser Val Glu Asn Pro Val Ser Lys Arg Gln
450 455 460

Phe Tyr Lys Gly Gln Lys Gln Ile Ala Gly Lys Pro Ile Thr Lys Asp
465 470 475 480

Thr Ala Glu Lys Val Glu Lys Gln Leu Asp Leu Val Val Asn Ser Lys
485 490 495

Lys Ser His Ala Ala Asn Tyr Arg Ile Asp Gly Tyr Glu Val Glu Gly
500 505 510

Lys Thr Gly Thr Ala Gln Val Ala Ala Pro Asn Gly Gly Gly Tyr Val
515 520 525

Lys Gly Pro Asn Pro Tyr Phe Val Ser Phe Met Gly Asp Ala Pro Lys
530 535 540

Lys Asn Pro Lys Val Ile Val Tyr Ala Gly Met Ser Leu Ala Gln Lys
545 550 555 560

Asn Asp Gln Glu Ala Tyr Glu Leu Gly Val Ser Lys Ala Phe Lys Pro
565 570 575

Ile Met Glu Asn Thr Leu Lys Tyr Leu Asn Val Gly Lys Ser Lys Asp
580 585 590

Asp Thr Ser Asn Ala Glu Tyr Ser Lys Val Pro Asp Val Glu Gly Gln
595 600 605

Asp Lys Gln Lys Ala Ile Asp Asn Val Ser Ala Lys Ser Leu Glu Pro
610 615 620

Val Thr Ile Gly Ser Gly Thr Gln Ile Lys Ala Gln Ser Ile Lys Ala
625 630 635 640

Gly Asn Lys Val Leu Pro His Ser Lys Val Leu Leu Leu Thr Asp Gly
645 650 655

Asp Leu Thr Met Pro Asp Met Ser Gly Trp Thr Lys Glu Asp Val Ile
660 665 670

Ala Phe Glu Asn Leu Thr Asn Ile Lys Val Asn Leu Lys Gly Ser Gly
675 680 685

Phe Val Ser His Gln Ser Ile Ser Lys Gly Gln Lys Leu Thr Glu Lys
690 695 700

Asp Lys Ile Asp Val Glu Phe Ser Ser Glu Asn Val Asp Ser Asn Ser
705 710 715 720

Thr Asn Asn Ser Asp Ser Asn Ser Asp Asp Lys Lys Lys Ser Asp Ser
725 730 735

Lys Thr Asp Lys Asp Lys Ser Asp
740

<210> 73
<211> 1677
<212> DNA
<213> Homo sapiens

<400> 73
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atthttgcaaa atthttaaaga actagggatt tccgataata cggttcagtc acttgaatca 180
atgggattta aagagccgac acctatccaa aaagacagta tcccttatgc gttacaagga 240
attgatattc ttgggcaagc tcaaaccggt acaggtaaaa caggagcatt cggatttcct 300
ttaatttgaga aagtagtagg gaaacaaggg gttcaatcgt tgattttagc acctacaaga 360
gaattggcaa tgcaggtagc tgaacaatta agagaattta gccgtggaca aggtgtccaa 420
gttgttactg tattcgggtg tatgcctatc gaacgccaaa ttaaagcctt gaaaaaaggc 480
ccacaaatcg tagtcggaac acctgggcgt gttatcgacc atttaaactc tgcacatta 540
aaaacggacg gaattcatac tttgatttta gatgaagctg atgaaatgat gaatatggga 600
ttcatcgatg atatgagatt tattatggat aaaattccag cagtacaacg tcaacaatg 660
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ccaaaaatca ttaagacaat gaataatgaa atgtctgatc cacaatcga agaattctat 780
acaattgtta aagaattaga gaaatttgat acatttacaa atttcctaga tgttcatcaa 840
cctgaattag caatcgatt cgacgtaca aaacgtcgtg ttgatgaatt aacaagtgtc 900
ttgatttcta aaggatataa agctgaagggt ttacatgggt atattacaca agcgaaacgt 960
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gcagcaagag gactagatat ttctgggtgt agtcatgttt ataactttga tatacctcaa 1080
gatactgaaa gctatacaca ccgtattggg cgtacgggtc gtgctggtaa agaaggatc 1140
gctgtaacgt ttgttaatcc aatcgaaatg gattatatca gacaaattga agatgcaaac 1200
ggtagaaaaa tgagtgcact tcgtccacca catcgtaaag aagtacttca agcacgtgaa 1260
gatgacatca aagaaaaagt tgaaaactgg atgtctaaag agtcagaatc acgcttgaaa 1320
cgcattttcta cagagttgtt aaatgaatat aacgatgttg atttagttgc tgcattttta 1380
caagagttag tagaagcaaa cgatgaaggt gaagttcaat taacttttga aaaaccatta 1440
tctcgcaaa ggcgtaacgg taaaccaagt gggtctcgta acagaaatag taagcgtggg 1500
aatcctaaat ttgacagtaa gagtaaacgt tcaaaaggat actcaagtaa gaagaaaagt 1560
acaaaaaaat tgcaccgtaa agagaagagc agcgggtggaa gcagacctat gaaaggtcgc 1620
acatttgctg accatcaaaa ataatttata gattaagagc ttaaagatgt aatgtct 1677

<210> 74
<211> 526

<212> PRT

<213> Homo sapiens

<400> 74

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Lys Arg Arg Ile Ile Leu Gln Asn Phe Lys Glu Leu Gly Ile Ser Asp
20 25 30
Asn Thr Val Gln Ser Leu Glu Ser Met Gly Phe Lys Glu Pro Thr Pro
35 40 45
Ile Gln Lys Asp Ser Ile Pro Tyr Ala Leu Gln Gly Ile Asp Ile Leu
50 55 60
Gly Gln Ala Gln Thr Gly Thr Gly Lys Thr Gly Ala Phe Gly Ile Pro
65 70 75 80
Leu Ile Glu Lys Val Val Gly Lys Gln Gly Val Gln Ser Leu Ile Leu
85 90 95
Ala Pro Thr Arg Glu Leu Ala Met Gln Val Ala Glu Gln Leu Arg Glu
100 105 110
Phe Ser Arg Gly Gln Gly Val Gln Val Val Thr Val Phe Gly Gly Met
115 120 125
Pro Ile Glu Arg Gln Ile Lys Ala Leu Lys Lys Gly Pro Gln Ile Val
130 135 140
Val Gly Thr Pro Gly Arg Val Ile Asp His Leu Asn Arg Arg Thr Leu
145 150 155 160
Lys Thr Asp Gly Ile His Thr Leu Ile Leu Asp Glu Ala Asp Glu Met
165 170 175
Met Asn Met Gly Phe Ile Asp Asp Met Arg Phe Ile Met Asp Lys Ile
180 185 190
Pro Ala Val Gln Arg Gln Thr Met Leu Phe Ser Ala Thr Met Pro Lys
195 200 205
Ala Ile Gln Ala Leu Val Gln Gln Phe Met Lys Ser Pro Lys Ile Ile
210 215 220
Lys Thr Met Asn Asn Glu Met Ser Asp Pro Gln Ile Glu Glu Phe Tyr
225 230 235 240
Thr Ile Val Lys Glu Leu Glu Lys Phe Asp Thr Phe Thr Asn Phe Leu
245 250 255
Asp Val His Gln Pro Glu Leu Ala Ile Val Phe Gly Arg Thr Lys Arg
260 265 270
Arg Val Asp Glu Leu Thr Ser Ala Leu Ile Ser Lys Gly Tyr Lys Ala
275 280 285
Glu Gly Leu His Gly Asp Ile Thr Gln Ala Lys Arg Leu Glu Val Leu
290 295 300

00955637 081001

Lys Lys Phe Lys Asn Asp Gln Ile Asn Ile Leu Val Ala Thr Asp Val
305 310 315 320

Ala Ala Arg Gly Leu Asp Ile Ser Gly Val Ser His Val Tyr Asn Phe
325 330 335

Asp Ile Pro Gln Asp Thr Glu Ser Tyr Thr His Arg Ile Gly Arg Thr
340 345 350

Gly Arg Ala Gly Lys Glu Gly Ile Ala Val Thr Phe Val Asn Pro Ile
355 360 365

Glu Met Asp Tyr Ile Arg Gln Ile Glu Asp Ala Asn Gly Arg Lys Met
370 375 380

Ser Ala Leu Arg Pro Pro His Arg Lys Glu Val Leu Gln Ala Arg Glu
385 390 395 400

Asp Asp Ile Lys Glu Lys Val Glu Asn Trp Met Ser Lys Glu Ser Glu
405 410 415

Ser Arg Leu Lys Arg Ile Ser Thr Glu Leu Leu Asn Glu Tyr Asn Asp
420 425 430

Val Asp Leu Val Ala Ala Leu Leu Gln Glu Leu Val Glu Ala Asn Asp
435 440 445

Glu Val Glu Val Gln Leu Thr Phe Glu Lys Pro Leu Ser Arg Lys Gly
450 455 460

Arg Asn Gly Lys Pro Ser Gly Ser Arg Asn Arg Asn Ser Lys Arg Gly
465 470 475 480

Asn Pro Lys Phe Asp Ser Lys Ser Lys Arg Ser Lys Gly Tyr Ser Ser
485 490 495

Lys Lys Lys Ser Thr Lys Lys Phe Asp Arg Lys Glu Lys Ser Ser Gly
500 505 510

Gly Ser Arg Pro Met Lys Gly Arg Thr Phe Ala Asp His Gln
515 520 525